RUSS OLSON VOLUME 22

SMALLER STREET RAILWAY SYSTEMS

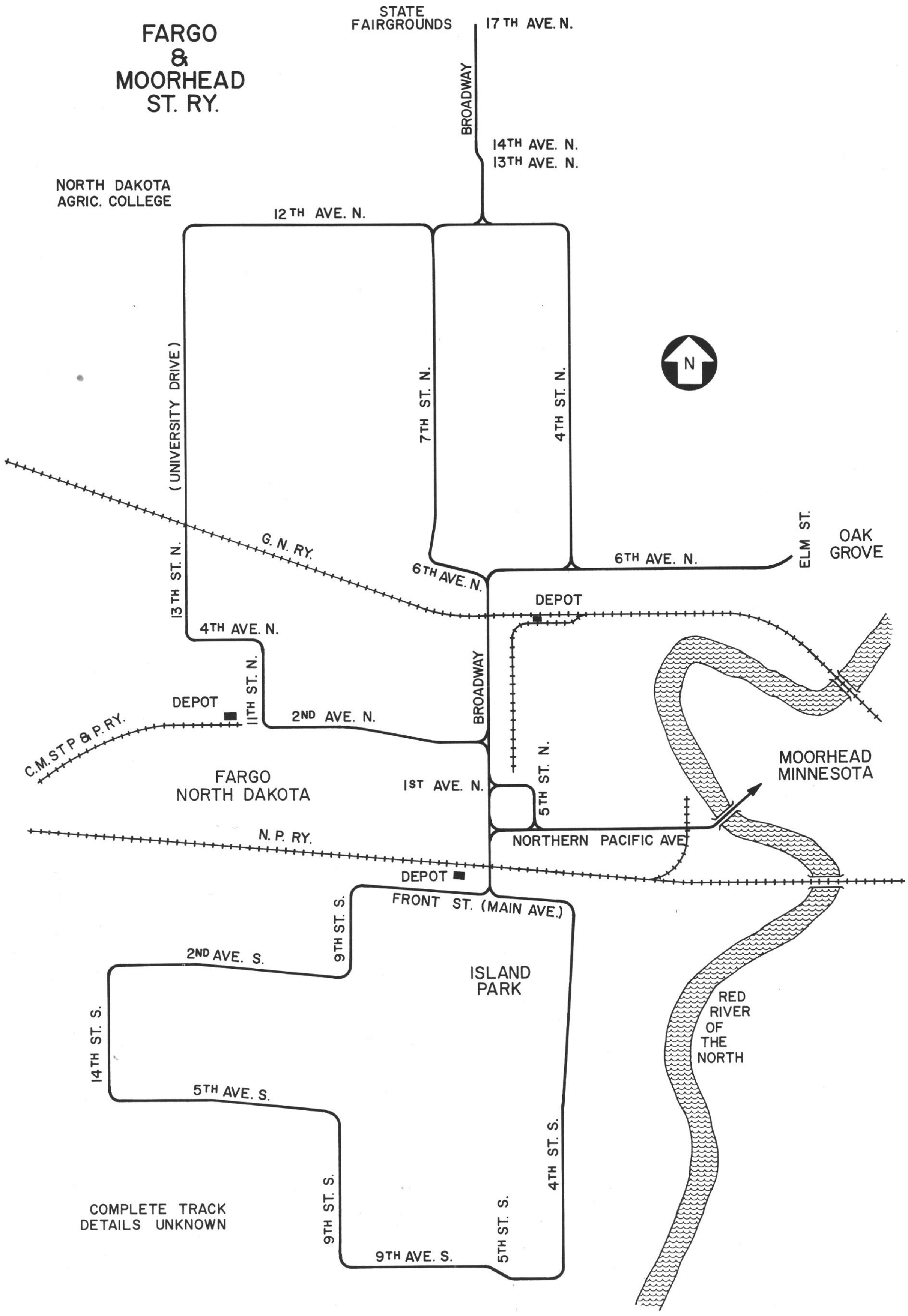
Description

Information regarding twelve small city systems in and around Minnesota.

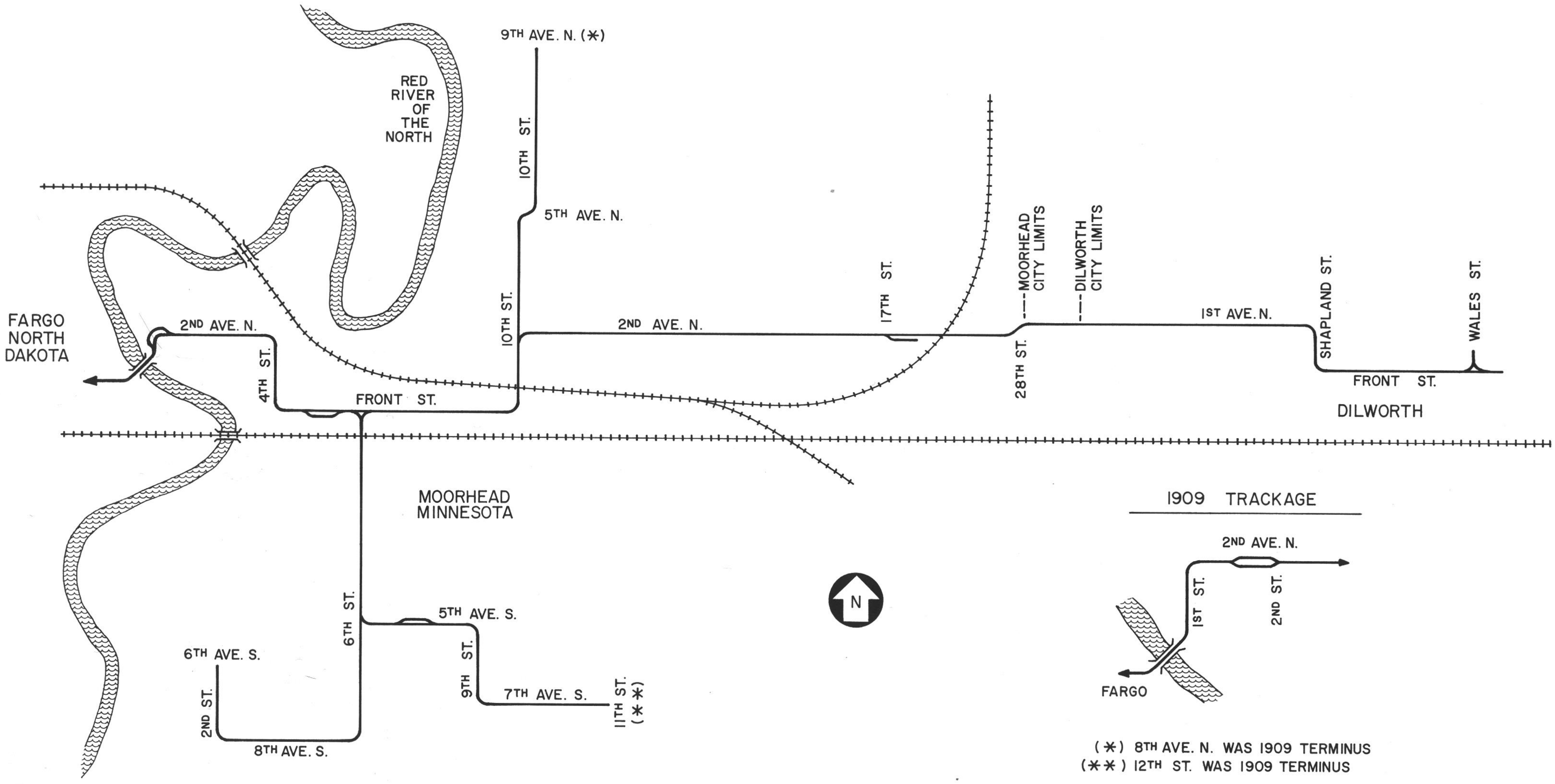
Sub-divisions Within This Volume

- Fargo & Moorhead Street Railway
- Granite City Railway
- Winona Railway & Light Company
- Mankato Electric Traction Company
- Wahpeton – Breckenridge Street Railway
- Stillwater Street Railway
- Brainerd Electric Street Railway
- Grand Forks Street Railway
- American Traction Company
- Anoka Street Railway
- Tower & Soudan Street Railway
- LaCrosse City Railway

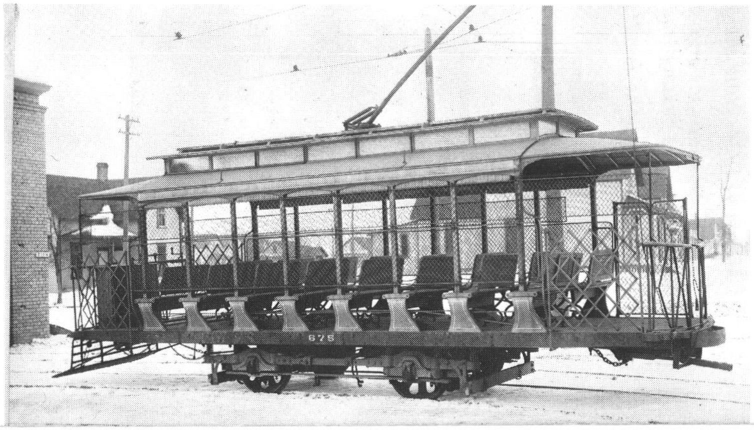
FARGO & MOORHEAD STREET RAILWAY


FARGO & MOORHEAD ST. RY.
STATE FAIRGROUNDS
17TH AVE. N.
BROADWAY
14TH AVE. N.
13TH AVE. N.
NORTH DAKOTA AGRIC. COLLEGE
12TH AVE. N.
(UNIVERSITY DRIVE)
13TH ST. N.
7TH ST. N.
4TH ST. N.
N
G. N. RY.
6TH AVE. N.
6TH AVE. N.
ELM ST.
OAK GROVE
DEPOT
4TH AVE. N.
11TH ST. N.
DEPOT
2ND AVE. N.
C.M.ST.P & P. RY.
BROADWAY
MOORHEAD MINNESOTA
FARGO NORTH DAKOTA
1ST AVE. N.
5TH ST. N.
N. P. RY.
NORTHERN PACIFIC AVE.
DEPOT
FRONT ST. (MAIN AVE.)
9TH ST. S.
2ND AVE. S.
ISLAND PARK
RED RIVER OF THE NORTH
14TH ST. S.
5TH AVE. S.
4TH ST. S.
9TH ST. S.
5TH ST. S.
9TH AVE. S.
COMPLETE TRACK DETAILS UNKNOWN

FARGO & MOORHEAD ST. RY.

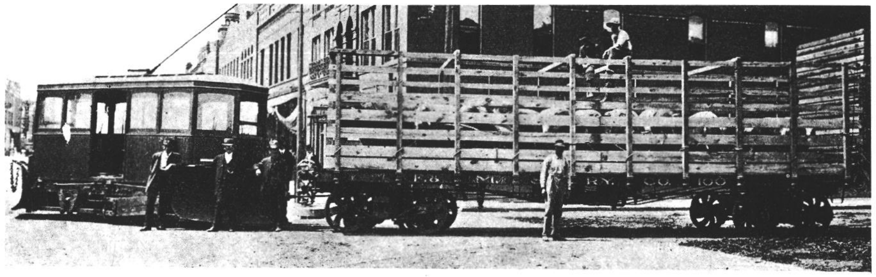

9TH AVE. N. (*)
RED RIVER OF THE NORTH
10TH ST.
5TH AVE. N.
FARGO NORTH DAKOTA
2ND AVE. N.
4TH ST.
FRONT ST.
10TH ST.
2ND AVE. N.
17TH ST.
MOORHEAD CITY LIMITS
DILWORTH CITY LIMITS
28TH ST.
1ST AVE. N.
SHAPLAND ST.
WALES ST.
FRONT ST.
DILWORTH
MOORHEAD MINNESOTA
N
6TH ST.
5TH AVE. S.
9TH ST.
7TH AVE. S.
11TH ST. (**)
6TH AVE. S.
2ND ST.
8TH AVE. S.
1909 TRACKAGE
2ND AVE. N.
1ST ST.
2ND ST.
FARGO

(*) 8TH AVE. N. WAS 1909 TERMINUS
(**) 12TH ST. WAS 1909 TERMINUS



Left: Open motor car 675 acquired second-hand from the Minneapolis St. Ry. at the Fargo carhouse. This car was scrapped in 1920. (Joe Hutchinson collection)

Right: Live stock hauling operations consisted of Snow Plow 1 pulling trailer 100, running between downtown Fargo and the Fairgrounds. (Electric Railway Journal)



FARGO & MOORHEAD STREET RAILWAY

FARGO, N.D. and MOORHEAD, MINN.

Fargo is the largest city in North Dakota; it lies in the valley of the Red River of the North, an important farming region. It is also an industrial, meat-packing and transportation center. The Northern Pacific Railway and Great Northern Railway mainlines to the Pacific Northwest pass through here. Its smaller Minnesota counterpart is Moorhead, located on the east side of the river. The 1915-1916 population figures were Fargo 20,750 persons, and Moorhead 5,702 persons.

Horsecar Era

A horsecar line was supposedly built in Fargo about 1879 by a group comprising Jacob Lowell, Major A. W. Edwards, G. J. Keeney, E. S. Tyler and Charles A. Roberts. The line was said to have run from the Great Northern railway tracks south on Broadway to Front St., on Front St. to 9th St., and on 9th St. to 13th Ave. S. Track was constructed on unpaved dirt streets and subsequently settled into the mud and deteriorated to the extent that efforts at repairs were futile and the service had to be abandoned.

Another company was formed whose stockholders were J. S. Huntington, C. A. Roberts, C. W. Darling, E. S. Tyler (president), J. B. Raymond, W. A. Kindred (treasurer), J. J. Shotwell (secretary), J. E. Haggart, J. S. Woodruff, W. A. Yerxa (vice-president) and W. F. Ball (attorney). Construction started May 23, 1882, on a horsecar line in Fargo which ran from the Great Northern Ry. depot on Broadway and Front St. to the 9th St. bridge. Two cars provided service on the line which opened June 7, 1882. On September 18, 1882, fire destroyed the horsecar barn along with all the equipment. Service was never resumed.

There were other attempts to start horsecar lines or electric lines but the deplorable condition of the unpaved streets combined with financial complications prevented any actual construction.

The Electric Car Era

General History

The Fargo & Moorhead Street Railway was incorporated July 24, 1902, in North Dakota by a group led by F. W. Larned and M. E. McDonald. The corporation was authorized to do business in Minnesota in November, 1902. These promoters soon encountered financial obstacles and sold their interests to L. B. Hanna, J. W. Smith, W. A. Scott, W. C. MacFadden and others. Apparently this new group re-incorporated under the original name as records indicate dates of February, 1903, in North Dakota, and April, 1904, in Minnesota. The first track construction took place in Fargo during 1904 and operations began in both Fargo and Moorhead in November of that year.

The Consumers Power Company purchased the Union Light Heat & Power Co., Fargo, on August 18, 1910, and the Fargo & Moorhead St. Ry. on August 9, 1911. Consumers Power Co. was managed and operated by H. M. Byllesby & Co., Chicago. The street railway was operated as a separate corporation by the Byllesby Co. under the general supervision of the local manager and general superintendent. In April, 1916, the Consumers Power Co. was re-organized as Northern States Power Co. (Minnesota).

The system reached its greatest extent during 1926-1927. Streetcar operations were abandoned in both Fargo and Moorhead during 1937.

Track and Overhead Construction

The first track construction took place in Fargo at 7th St. and 6th Ave. N. during May 1904. The system was completed to an extent sufficient to open service November 25, 1904, on the following. Fargo: North Side Loop line, South Side Loop line, and Oak Grove line. Moorhead: a line from Fargo over the Northern Pacific Ave. bridge (Red River of the North) to the Moorhead Normal School (Moorhead State College) ending at 7th Ave. S. and 12th St.

1905-1906 track construction projects consisted of the following.
Fargo: a line to the North Dakota Agricultural College, authorized in 1905; a siding on Broadway near Northern Pacific Ave., authorized June, 1905; and a line to the North Dakota Fairgrounds, authorized in June, 1906. Moorhead: a line from Center Ave. to the Clay County Courthouse and St. Ansgar Hospital ending at 8th Ave. N. and 10th St., placed in operation during 1905.

The 1907 U.S. Census provided these figures: first main track 10.00 miles (9.23 miles span wire construction and 0.77 miles side-bracket construction), sidings 0.34 miles, total track 10.34 miles. Rail used ranged from 48 lbs. to 70 lbs. per yard.

An April, 1911, issue of the Electric Traction Weekly reported that a planned extension from Moorhead to Dilworth, Minnesota, would not be constructed during 1911. Plans had been prepared for a bridge across the Red River at Fargo. The Scherzer Rolling Lift Bridge Company was to furnish plans for the movable part, which was to be 60 ft. long. The approaches were 400 ft. on the east side and 150 ft. on the west side of the river. Construction of the line from 10th St. and 2nd Ave. N. in Moorhead to the Northern Pacific Ry. roundhouse and shops at Dilworth was undertaken during 1912. The line was 3.65 miles long, several miles of which traversed open country, and opened for service December 9, 1912. The total track mileage in Moorhead was then 7.27 miles.

Transit directory figures for 1916 indicated the Fargo-Moorhead system total track was 15.584 miles. Moorhead only total track in 1917 was 7.19 miles.

During 1923 a line was built in Moorhead from 5th Ave. S. and 6th St. to Concordia College, ending at 2nd St. and 6th Ave. S.

Track mileage figures available from transit directories are summarized in this table.

	Fargo-Moorhead Combined			Moorhead only
Years	First Track	Sidings	Total Track	Total Track
1922				6.33 miles
1923			15.81 miles	
1926				7.04 miles
1926-1927	15.633 miles	0.835 miles	16.468 miles	
1927				6.95 miles
1928	13.326 miles	1.048 miles	14.374 miles	
1929	13.696 miles	1.048 miles	15.017 miles	
1930-1932			15.16 miles	
1932				6.92 miles
1933			14.99 miles	
1934			13.453 miles	
1935-1937			13.87 miles	

The last local line in Moorhead was abandoned June 30, 1937. The interstate line from Fargo through Moorhead to Dilworth was abandoned July 2, 1937. The last regular car was number 27 with a specially chartered last car following being number 14. The last line in Fargo, the South Side Loop line, was abandoned August 21, 1937.

Power Generation and Distribution

Power was purchased from the Union Light Heat & Power Company. Fargo. Their first street railway unit was a 550 volts D.C. 150 KW Generator driven by one 16½" x 21" vertical Buckeye steam engine placed in service during 1904. A second street railway unit, similar to the first, was installed later, together with one 550 volts D.C. Motor-Generator Set.

The Fargo power plant underwent a rebuilding during 1915-1916. As part of the total modernization program all reciprocating engine units were removed except for one street railway unit (and one 400 KW Alternator). Two Turbo-Alternators were installed together with three Motor-Generator Sets of which one Motor-Generator Set was for the street railway load. During 1923 the one old street railway steam-driven Generator unit was removed.

Carhouses and Offices

The original carhouse was located at 1st St. and Northern Pacific Ave. in Fargo.

A new carhouse was built during 1906 on 11th St. N. between 2nd Ave. N. and 3rd Ave. N. (216 11th St. N.) in Fargo. Offices were moved to 612 Northern Pacific Ave. in Fargo.

Operations

Very little information has been located pertaining to operations.

The first lines opened in Fargo during November (24th/25th), 1904, required four cars for the North Side Loop and South Side Loop lines together, and one car for the Oak Grove line.

One Flat Trailer acquired in 1908 was fitted with slatted sides and ends for use hauling livestock from the various railroads to the fairgrounds. It was pulled by the Snow Plow.

The company was controlled by the Northern States Power Co. but managed and operated by the H. M. Byllesby & Co. of Chicago from 1911 onward.

As of November, 1923, the fare schedule was 7¢ cash, 4 tokens for 25¢, 12 tokens for $1, and school children 5¢.

Equipment

The original equipment consisted of seven single-truck, closed passenger motor cars and one snow plow. The snow plow was a single-truck, double-end, arch-roof, wedge plow built by the J. G. Brill Co. on order #14799 in November, 1905. Assigned the number 1, it was also used in maintenance-of-way service. Pedestal truck ORDERED 11-17-1905

Four passenger motor cars and one snow sweeper were purchased during 1905.

A considerable amount of equipment was purchased second-hand from the Twin City Rapid Transit Co. during 1905-1906, much of it intended for use in service to the fairgrounds.

Acquired 1905

687-688 single-truck, eight-bench, open passenger motor cars built by American Car Co. 1893.
466,476,480 single-truck, 18 ft. closed passenger motor cars built by J.M. Jones' Sons Co. 1891.
235,238,244-247,256-258,260-262 single-truck, open passenger trailers (former horsecars) built by J. M. Jones' Sons Co. 1888.

Acquired 1906

638,639,651,675 single-truck, eight-bench, open passenger motor cars built by American Car Co. 1893.
1591,1592,1629 single-truck, eight-bench, open passenger motor cars built by LaClede Car Co. 1893.
207,213,219,224-226 single-truck, open passenger trailers (former horsecars) built by Pullman's Palace Car Co. 1888.

The 1907 U.S. Census reported 41 passenger cars (14 closed and 27 open), 1 work car, 1 snow plow and 1 snow sweeper. Of the 44 total cars, 21 had two motors, 1 had three motors, and 22 were trailers.

In 1908 one flat trailer, number 100, 36'6" long, was purchased from the D. W. Mitshkum Company. It was fitted with slatted sides and ends (no roof) for hauling livestock to the fairgrounds. 9'4" WIDE 19,000 LBS. WEIGHT WOOD CONSTRUCTION DETROIT, MICH

In 1912 one single-truck snow sweeper, 26 ft. long, was ordered from the McGuire-Cummings Mfg. Co.

On May 15, 1913, one 28 ft., double-truck, double-end, deck-roof, closed passenger motor car, number 15, was acquired second-hand from the Philadelphia Rapid Transit Co. Their number 1906, it had been built by the J. G. Brill Co. on order number 12402 in November, 1902. [1900-1949]

One 33 ft., double-end, single truck, deck-roof, passenger motor car of wood construction, number 10, was ordered from the American Car Co., order number 1030, in July, 1914, and received in October.
5-15-1914 Bldr's photo 10-20-1914

A 1916 transit directory reported 21 passenger motor cars, 21 passenger trailers, 2 work cars, 1 snow plow, and 2 snow sweepers.

An equipment modernization program was undertaken through the purchase of single-truck, double-end, lightweight Birney cars.
1920: 15 cars, numbered 12-14 and 16-27, built by Cincinnati Car Co. (Cincinnati #139 truck). Order #2480 NOV 1920
1923: 1 car, number 28, built by American Car Co. (Brill 79-E1 truck). Order # 1359 8-16-23

Later transit directory information as to equipment owned is summarized following.
1923-1925: 29 passenger motor cars, 16 passenger trailers, 4 service motor cars, and 2 service trailers.
1926: 26 passenger motor cars, 14 passenger trailers, and 5 service motor cars.
1927: 26 passenger motor cars (16 active, 6 extra, 5 obsolete), 9 passenger trailers (all obsolete), and 5 service trailers.
1928: 25 passenger motor cars, 1 passenger trailer, 5 service motor cars, and 1 service trailer.
1933: 16 passenger motor cars (all Birneys), 1 passenger trailer, and 6 service motor cars.

TWIN CITY LINES, WINTER 2008
FARGO & MOORHEAD STREET RAILWAY

Comments, Corrections and Additions for "Electric Railways of Minnesota"

History

1. The corporate name DOES NOT include the word ELECTRIC. Directories, Timetables, Photographs (for example that of car #6 on page 14) show the title as shown in the above heading.

Track Construction

2. There were two opening dates I did not have in my records: Moorhead December 2, 1904, and Concordia College line in Moorhead September 12, 1923.

Operations

3. Operating information that does not appear in my book and supplement is on pages 18-19-20 of Twin City Lines.

Equipment

4. . The ex Twin City open cars are listed in the text as built in 1891 and on the photograph on page 15 as built 1890. The roster on pages 18-19 list the correct date which is 1893.

5. Photo of #8: caption on reverse side says St. Louis Car Company. The SLCC Order List from 1899 onward in Lind's book "From Horsecars to Streamliners" does NOT include them either as new building or resales. The photo of #8 shows it with what appears to be a St. Louis number 9 truck. If built by SLCC these cars must have been purchased second-hand in 1905.

6. I have a later photograph of car #6 with FLAT sides, not concave-convex as in the photo on page 14. This car must have been rebuilt at a later date.

7. I am speculating that the three ex TCL single-truck closed motor cars (466,476,480) may have been renumbered 12-14 since the ex Philadelphia car was renumbered 15 when acquired in May 1913.

8. The new car purchased from American Car Co. in October 1914 must have been second number 10.

9. The open cars purchased second-hand in 1920 may have come from the Ottuma Railway & Light Company, Ottumwa, Iowa. That is the only company I can find in a July 1918 directory under "O". This company was controlled by H. M. Byllesby & Co. starting in 1906. As part of a modernization program begun in 1906 new closed open motors cars were purchased. According to "Iowa Trolleys" roster for that company they had seven 10-bench open cars:

#57 identified only as a single-truck open motor car with no other information.
Built by American Car Company in 1906:
#59,61,63,65,67 Order #644 1-15-1906 FOR DELIVERY 4-1-06 BLARS PHOTO 4-17-1906
#69 Order #656 2-24-1906 FOR DELIVERY 6-15-06 BLARS PHOTO 5-4-1906
All were 30'8" long, had Brill 21-E trucks with two GE 54 motors.

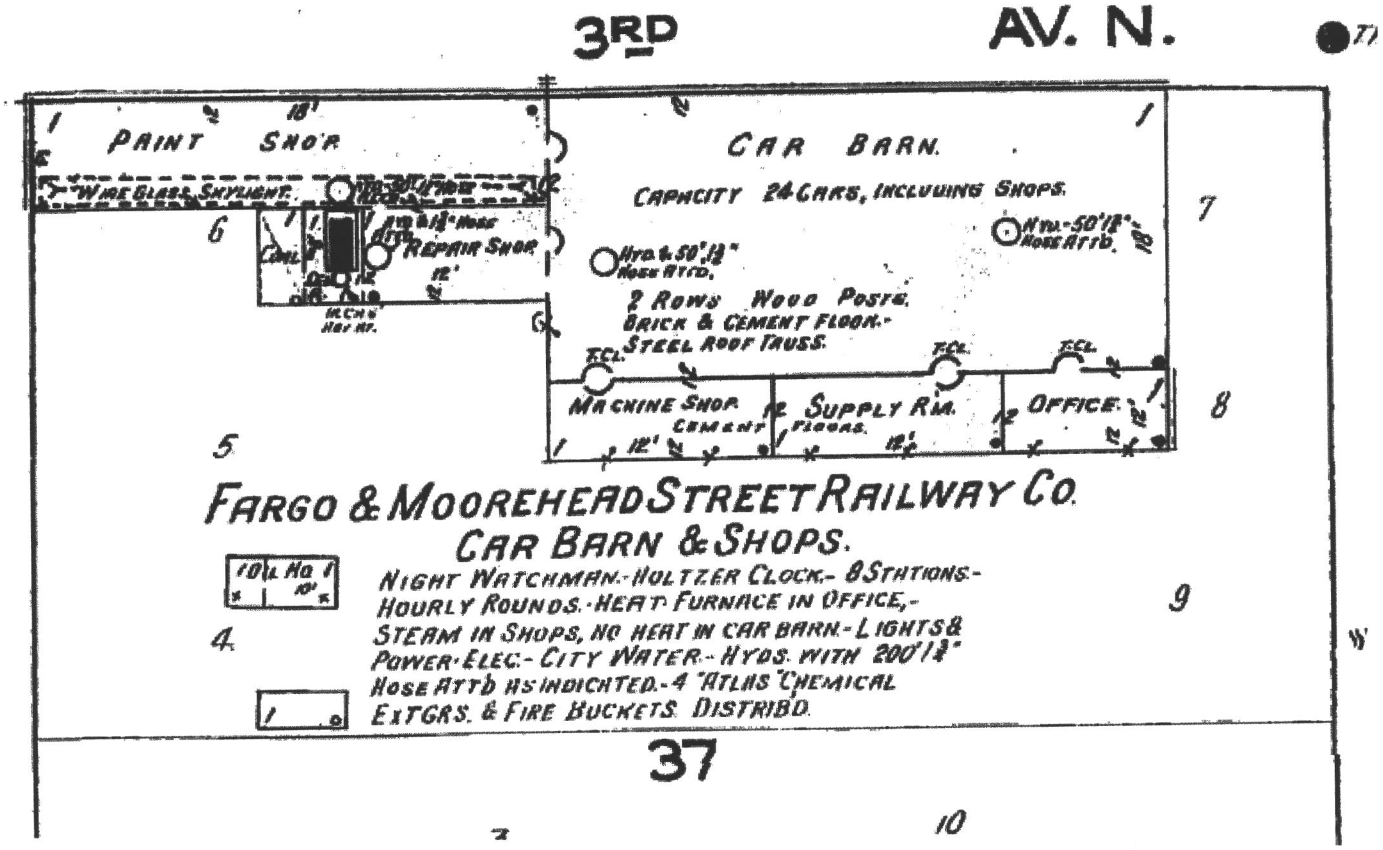
In 1920 Ottumwa was replacing the 1906 cars with Birney cars. According to a 1922 Ottumwa valuation in the University of Iowa Special Collections cars 57,59,65,67 were off the roster by 1922.

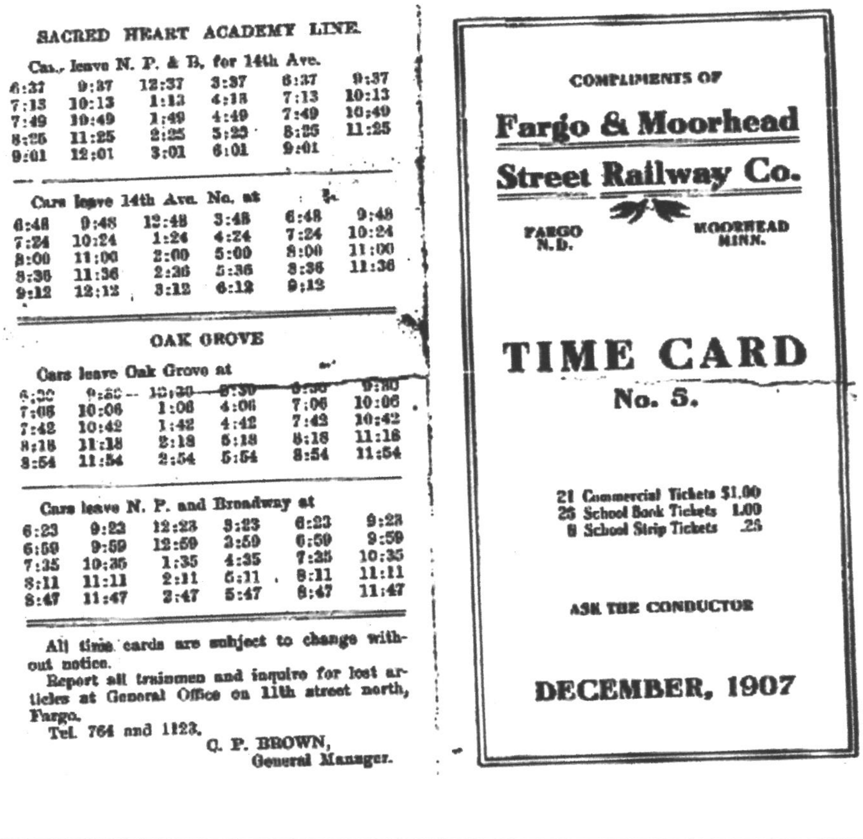
10. Snow Plow #1, J. G. Brill Co. 1905 apparently was renumbered A3. The Snow Sweeper built by McGuire-Cummings Mfg. Co. in 1912 was numbered A2. Number A1 must have been either the Snow Plow or the Work Car listed in the 1907 U. S. Census.

11. Birney car identification. (a) The roof ventilators on Birney car #28 in the photo at North Mankato on page 21 are different from the roof ventilators on the other Birney cars (b) Note that the Birney cars used Twin City Lines fenders. (c) The destination signs appear NOT to be roll signs. They seem to be individual signs fastened by clips to a frame mounted over the window.

AVERY® PV119ED

APR 1916


3RD AV. N.
77
PAINT SHOP
18'
WIRE GLASS SKYLIGHT
CAR BARN
CAPACITY 24 CARS, INCLUDING SHOPS.
HYD. & 50' 1½" HOSE ATTD.
HYD. 50' 1½" HOSE ATTD.
REPAIR SHOP
12'
2 ROWS WOOD POSTS.
BRICK & CEMENT FLOOR.
STEEL ROOF TRUSS.
T.CL.
MACHINE SHOP CEMENT
SUPPLY RM. FLOORS
OFFICE
12'
6
7
8
5
4
9
10
FARGO & MOOREHEAD STREET RAILWAY CO.
CAR BARN & SHOPS.
NIGHT WATCHMAN - HOLTZER CLOCK. - 8 STATIONS - HOURLY ROUNDS. - HEAT: FURNACE IN OFFICE, - STEAM IN SHOPS, NO HEAT IN CAR BARN - LIGHTS & POWER: ELEC. - CITY WATER - HYDS. WITH 200' 1½" HOSE ATTD AS INDICATED. - 4 "ATLAS" CHEMICAL EXTGRS. & FIRE BUCKETS DISTRIBD.
37



SACRED HEART ACADEMY LINE.

Cars leave N. P. & B. for 14th Ave.

6:37	9:37	12:37	3:37	6:37	9:37
7:13	10:13	1:13	4:13	7:13	10:13
7:49	10:49	1:49	4:49	7:49	10:49
8:25	11:25	2:25	5:25	8:25	11:25
9:01	12:01	3:01	6:01	9:01	

Cars leave 14th Ave. No. at

6:48	9:48	12:48	3:48	6:48	9:48
7:24	10:24	1:24	4:24	7:24	10:24
8:00	11:00	2:00	5:00	8:00	11:00
8:36	11:36	2:36	5:36	8:36	11:36
9:12	12:12	3:12	6:12	9:12	

OAK GROVE

Cars leave Oak Grove at

6:30	9:30	12:30	3:30	6:30	9:30
7:06	10:06	1:06	4:06	7:06	10:06
7:42	10:42	1:42	4:42	7:42	10:42
8:18	11:18	2:18	5:18	8:18	11:18
8:54	11:54	2:54	5:54	8:54	11:54

Cars leave N. P. and Broadway at

6:23	9:23	12:23	3:23	6:23	9:23
6:59	9:59	12:59	3:59	6:59	9:59
7:35	10:35	1:35	4:35	7:35	10:35
8:11	11:11	2:11	5:11	8:11	11:11
8:47	11:47	2:47	5:47	8:47	11:47

All time cards are subject to change without notice.

Report all trainmen and inquire for lost articles at General Office on 11th street north, Fargo.

Tel. 764 and 1123.

C. P. BROWN,
General Manager.

COMPLIMENTS OF

Fargo & Moorhead Street Railway Co.

FARGO
N. D.

MOORHEAD
MINN.

TIME CARD

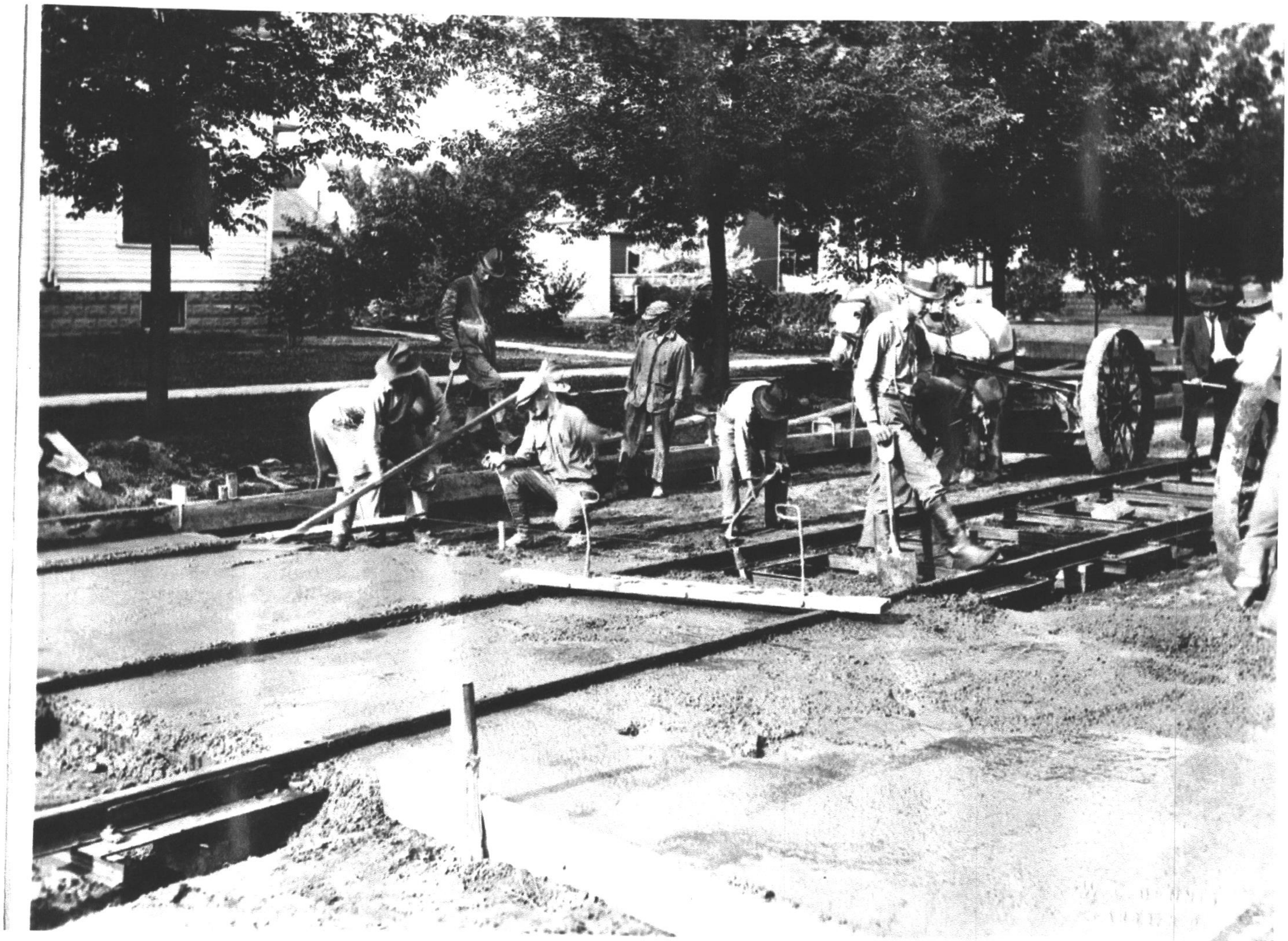
No. 5.

21 Commercial Tickets $1.00
25 School Book Tickets 1.00
8 School Strip Tickets .25

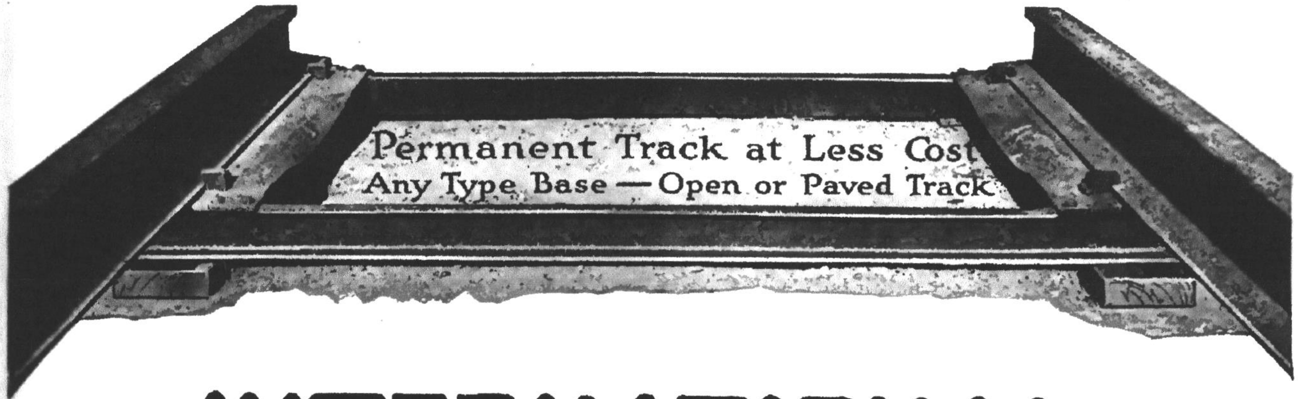
ASK THE CONDUCTOR

DECEMBER, 1907

During May 2009 the City of Fargo undertook a street. reconstruction project on 12th Ave. N. which uncovered street railway tracks. The remnants indicated the Twin Steel Tie Track system (International Steel Tie Co.) had been used. (Also used on 8th Ave. S. in Moorhead 1922.) The project also revealed the track continued west on 12th Ave. N. past University Drive, about 100 ft. in length, also of the Twin Steel Tie Track system but using 70 lb. T rail and 7" high T rail. ~~(See photos of the salvaged rail)~~ The 7" high rail apparently was used on the west end of this track. This probably was a spur track serving the Agricultural College. Newspaper accounts from the beginning of the line indicate special cars would be placed on the line for patrons of performances at the Opera House, State Normal School and North Dakota Agricultural College.



8TH AVENUE SOUTH, MOORHEAD,
AUG. 1922


Permanent Track at Less Cost
Any Type Base — Open or Paved Track

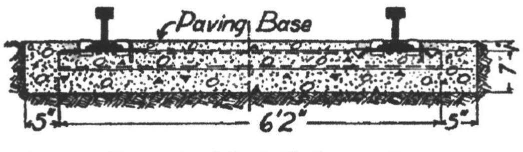
INTERNATIONAL

STEEL TWIN TIES

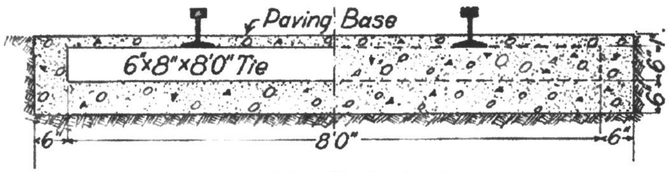
33% to 45% Saved in Construction Materials

First in blocking to grade and line. Three wood ties require six blocks. An International Steel Twin Tie requires only four blocks—a saving of 33 1/3% in blocking!

Look at the concrete required for the two track sections below—



International Steel Tie Construction



Standard Wood Tie Construction

The wood tie construction requires 1495 cubic yards of concrete per mile of track. International Tie construction, because of the shallow foundation, requires only 790 cubic yards of concrete per mile of track. There's a 48% saving in concrete for foundation or ballast, with 7 inches instead of only 6 inches of effective bearing material beneath the tie.

Another saving—2 feet less paving has to be put back because International Ties require an excavation of only 7 feet wide as against 9 feet for wood tie construction. There's at least 20% saving in repaving.

And bear in mind you are getting about 50% more speed all the time—delays are eliminated—everything goes forward on schedule.

If you don't believe it ask the man who has used International Steel Twin Ties.

Let us submit comparative estimates for your job.

Prompt Deliveries Made from Stock

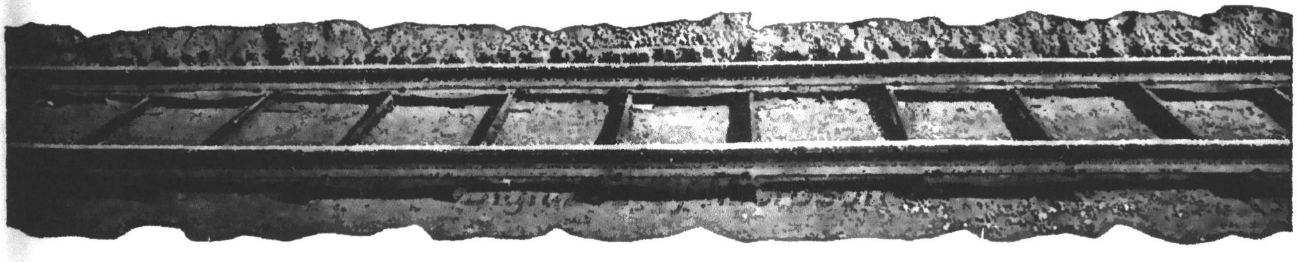
The International Steel Tie Company

Manufacturers of Steel Twin Ties and Crossing Foundations

General Sales Office and Works: Cleveland, Ohio

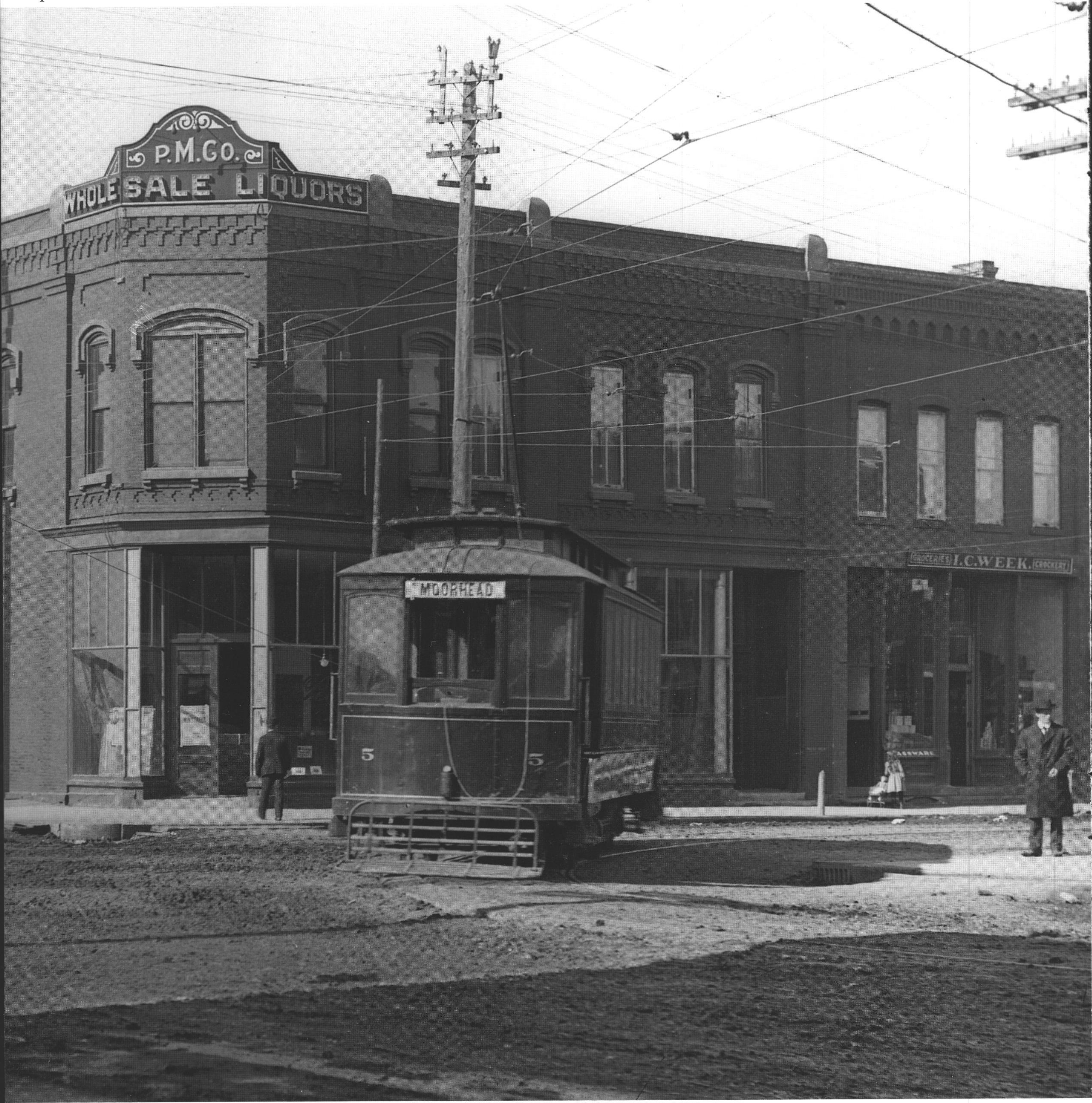
REPRESENTATIVES:

Western Eng'g Sales Co., Los Angeles, Cal.
San Francisco, Cal. Seattle, Wash.
R. J. Cooper Co., Salt Lake City, Utah.
J. E. Lewis & Co., Dallas, Texas.
Maurice Joy, Philadelphia.
William H. Ziegler, Minneapolis, Minn.

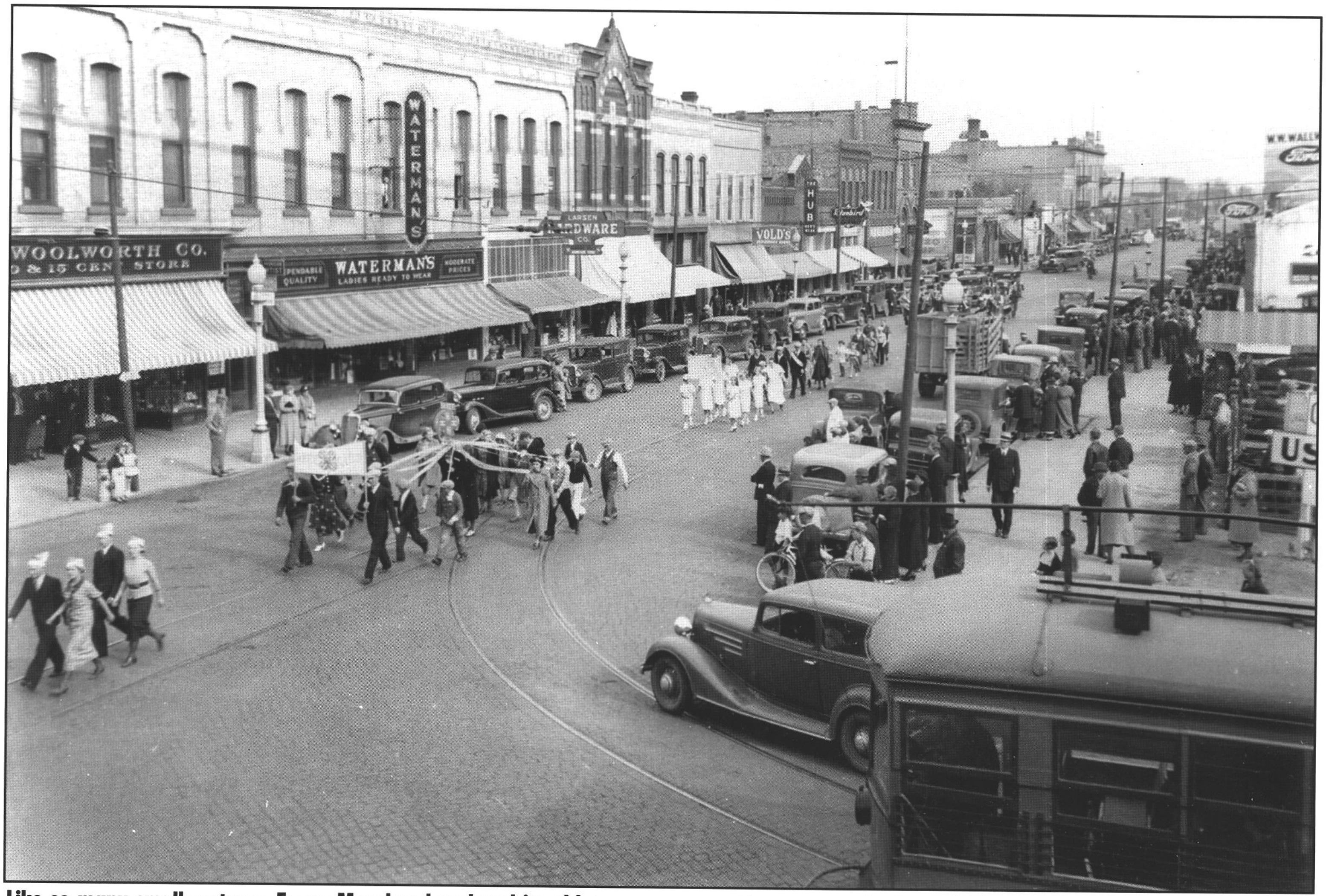


MOORHEAD STREETCARS

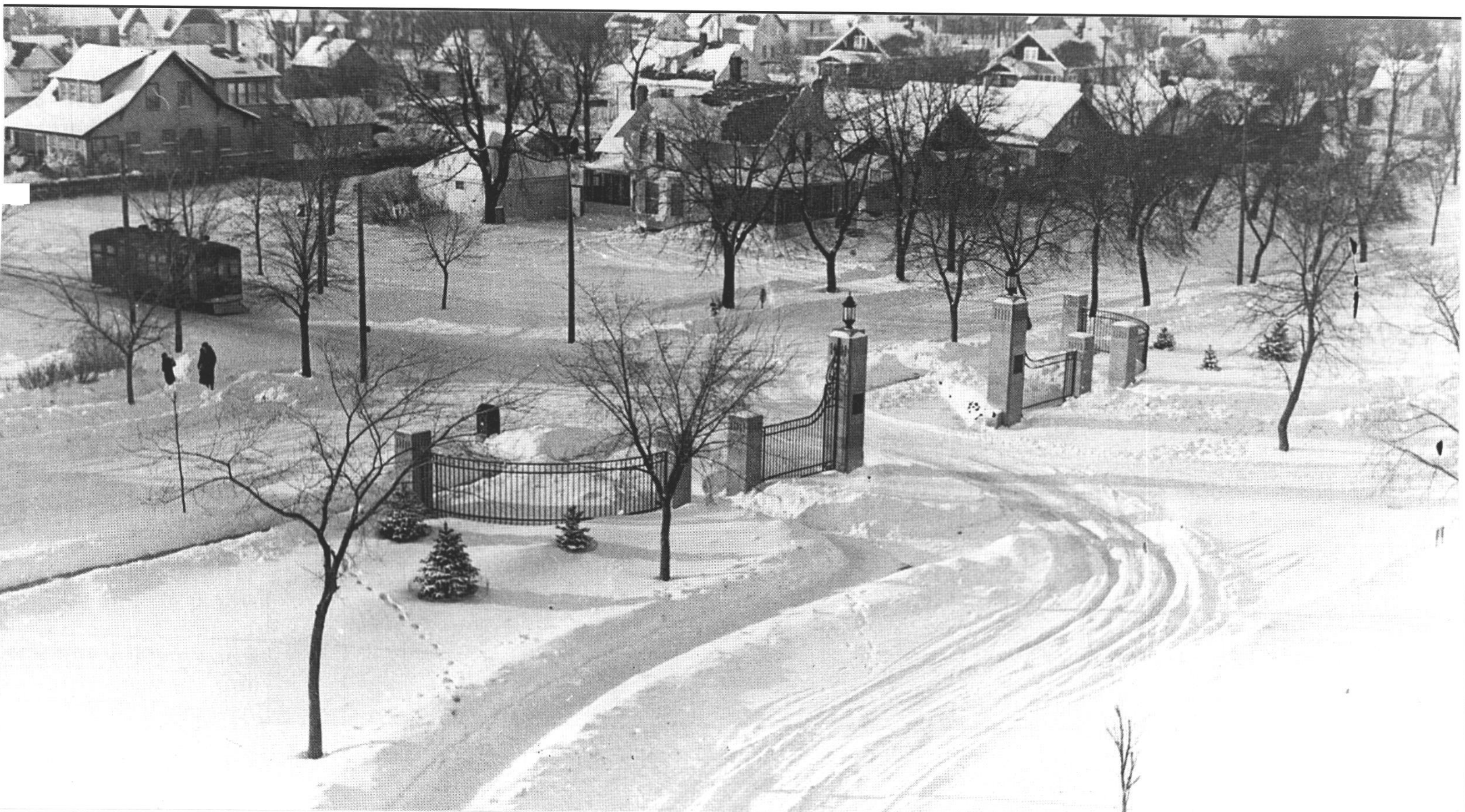
The Fargo & Moorhead Street Railway was one of four Minnesota streetcar systems that crossed a state line. The others were Duluth-Superior, Grand Forks-East Grand Forks and Wahpeton-Breckenridge. It operated from 1904 to 1937. Four lines served each city, and about eight miles of track were operated in each state. The longest line on the Minnesota side extended over three miles to the Northern Pacific division point in Dilworth, much of it on private right of way. This story covers only the Moorhead operation.

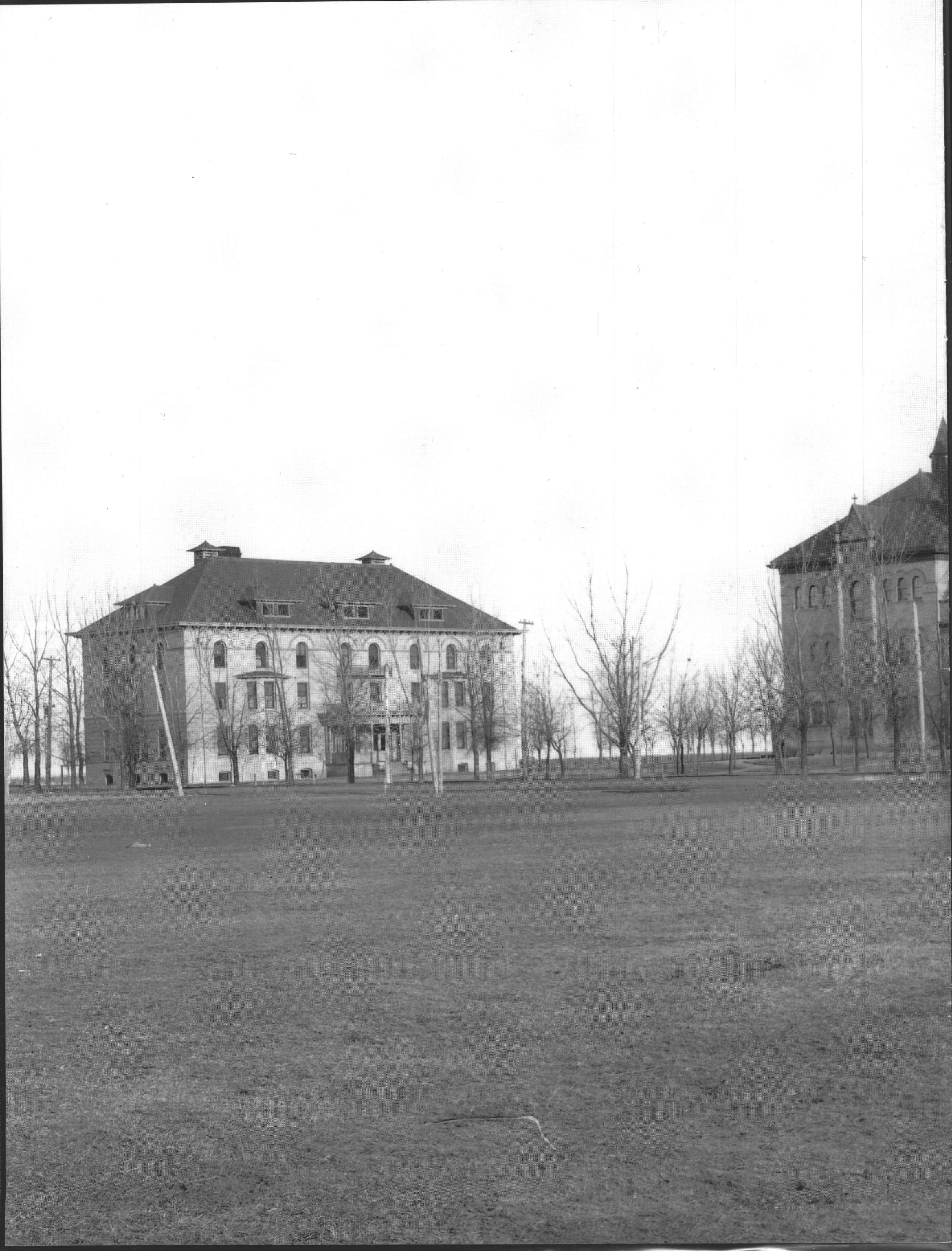


A Fargo bound car in downtown Moorhead is turning off Front Street onto 4th Street. O.E. Flaten photo. Clay County Historical Society collection.


WOOLWORTH CO.
5 & 15 CENT STORE
WATERMAN'S
DEPENDABLE QUALITY
WATERMAN'S
LADIES READY TO WEAR
MODERATE PRICES
LARSEN
HARDWARE
CO.
VOLD'S
THE HUB
W.W. WALL
Ford
Ford
US

Like so many small systems, Fargo-Moorhead replaced its old two-man cars with one-man single truck Birneys. One of them is facing north on 6th Street at Front, two blocks east of the previous photo.
In later years the State College line was cut back one block to the edge of the campus at 11th Street.
Both Clay County Historical Society collection.





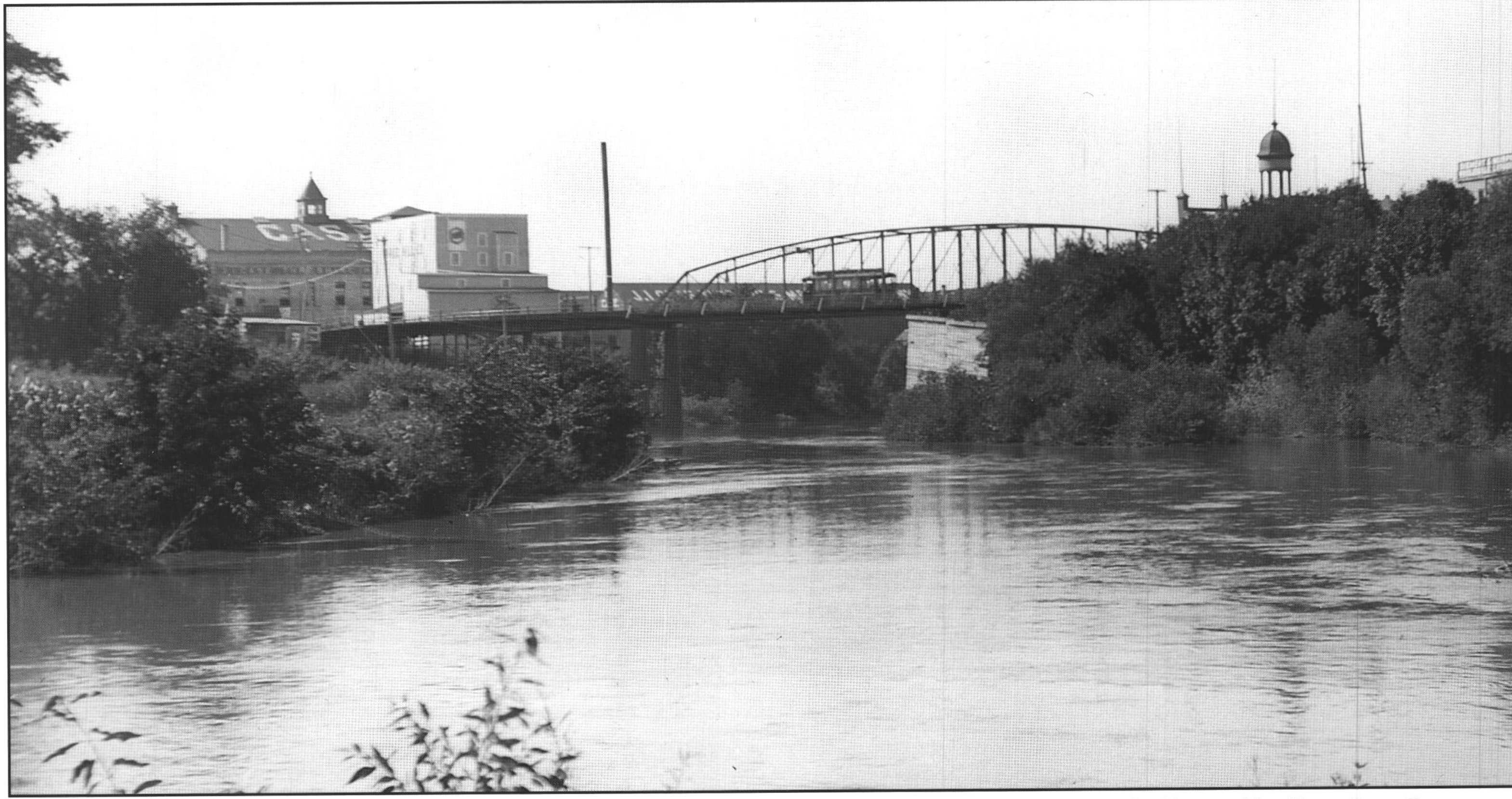
JOSHUA MEIER 07250

Minnesota Transportation Museum

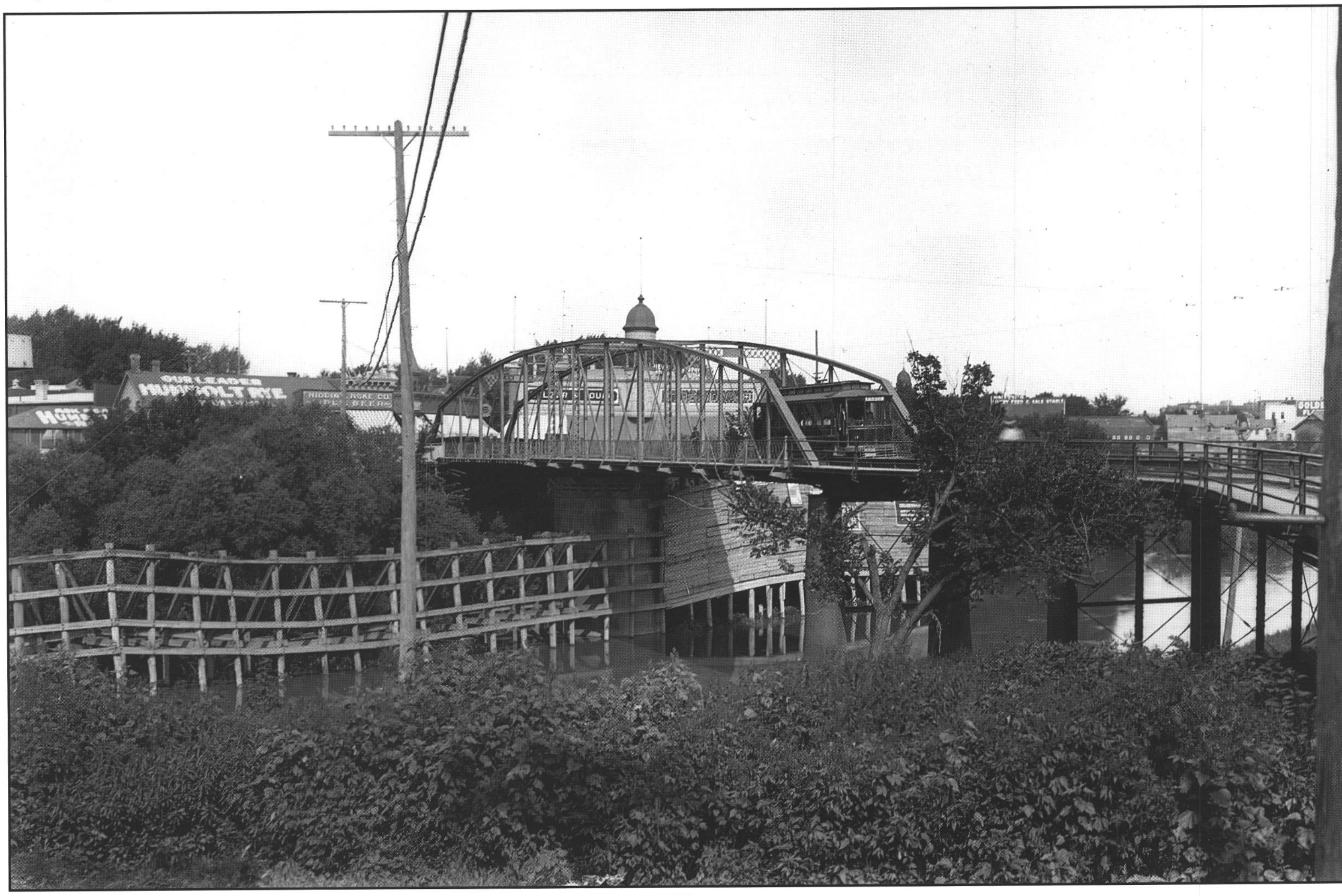
MINNEGAZETTE

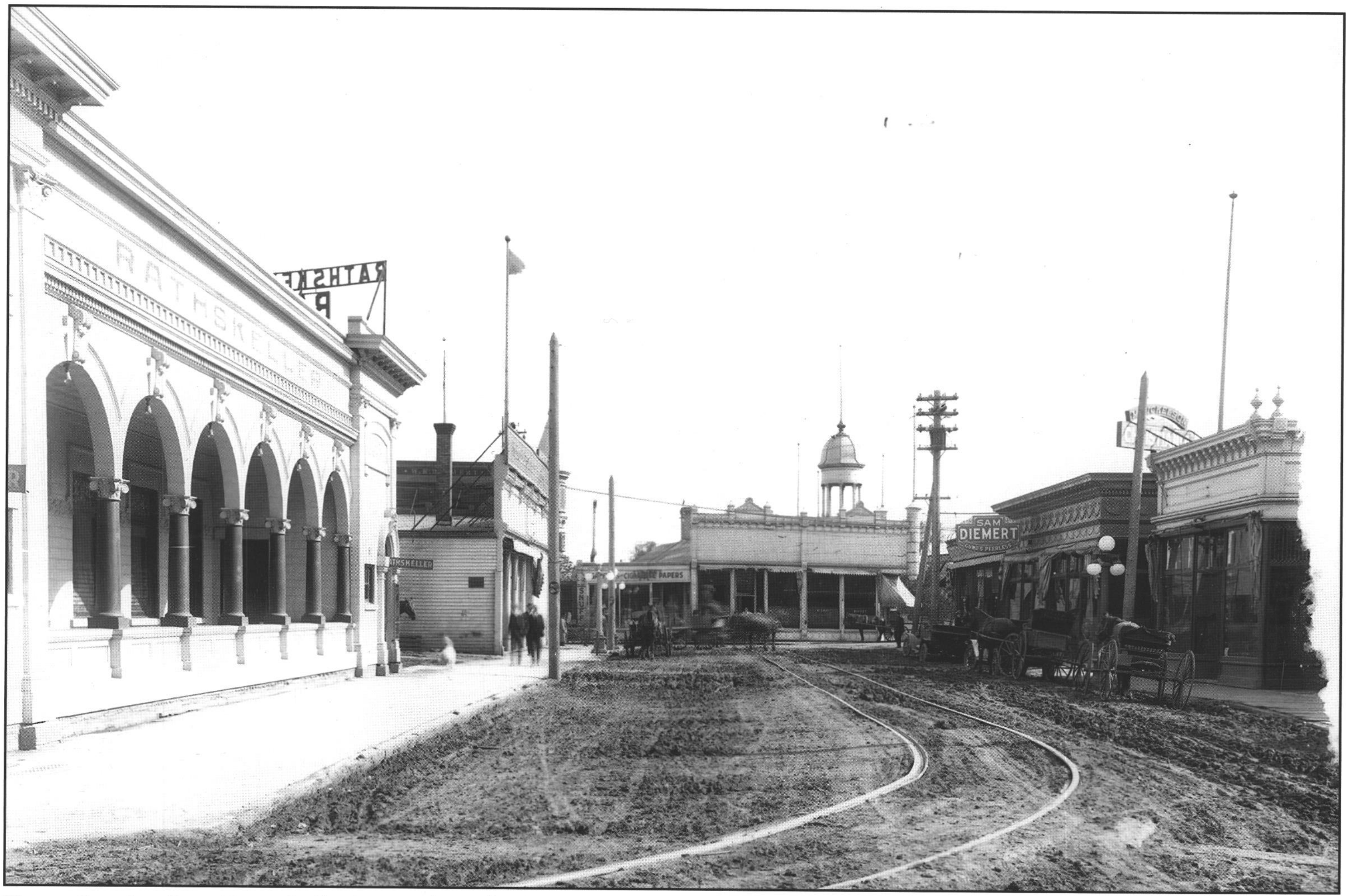
Spring 2003

FARGO & MOORHEAD STREET RAILWAY

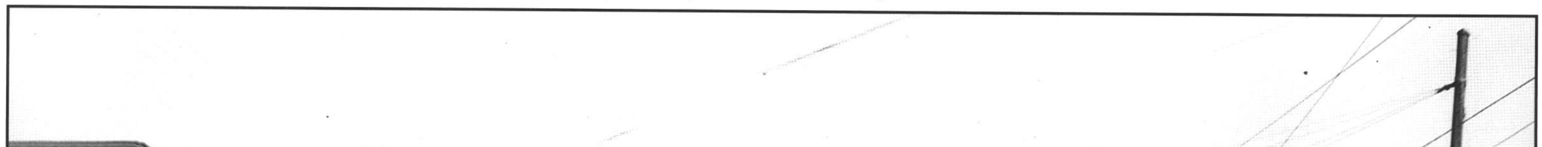


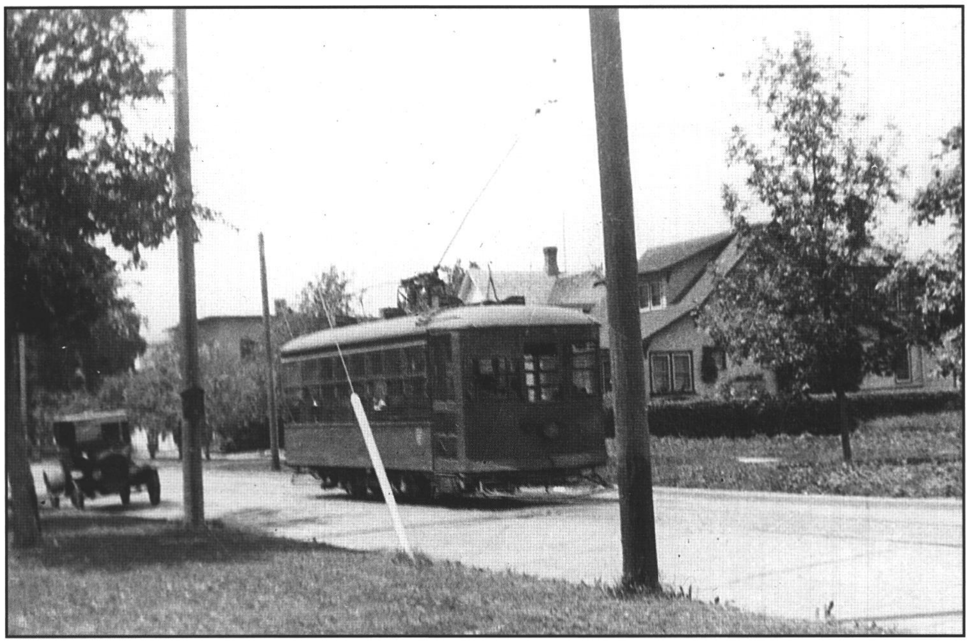
The two cities were linked by this bridge over the Red River that emptied into Northern Pacific Avenue on the Fargo side. Note the tall, rounded dome in both photos, as well as the one on the next page. It sat at the Moorhead end of the bridge. Both O. E. Flaten photos, Clay County Historical Society collection.




RATHSKELLER
RATHSKELLER
RATHSKELLER
SAM DIEMERT
PAPERS

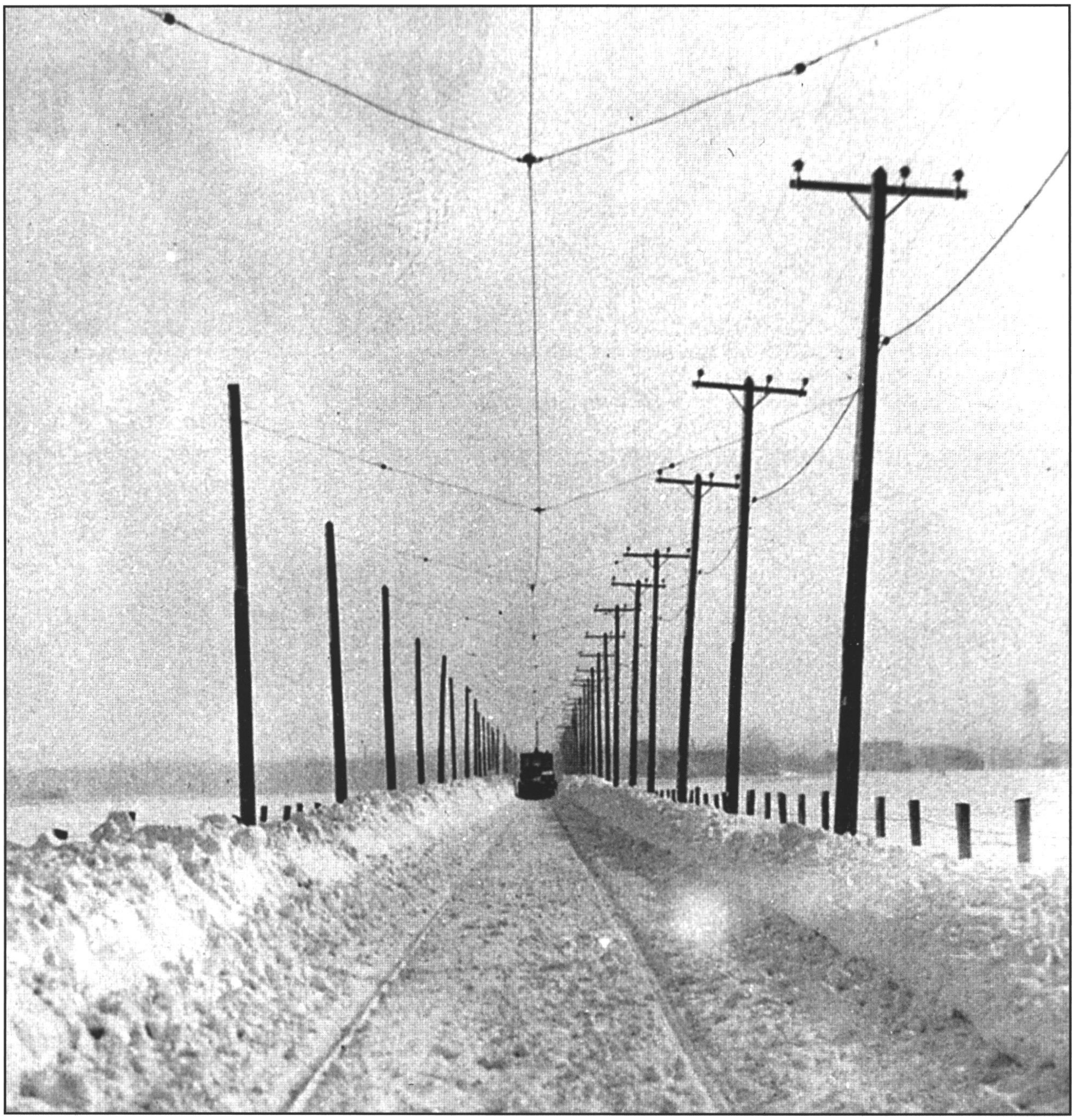
The caption describes this as the 1st Street saloon district, just on the Moorhead side of the river.
Below: A streetcar has just turned from 4th Street onto Front Street. This is the same intersection as the photo on page 20, but looking east instead of northwest. Both O. E. Flaten photo. Clay County Historical Society collection.

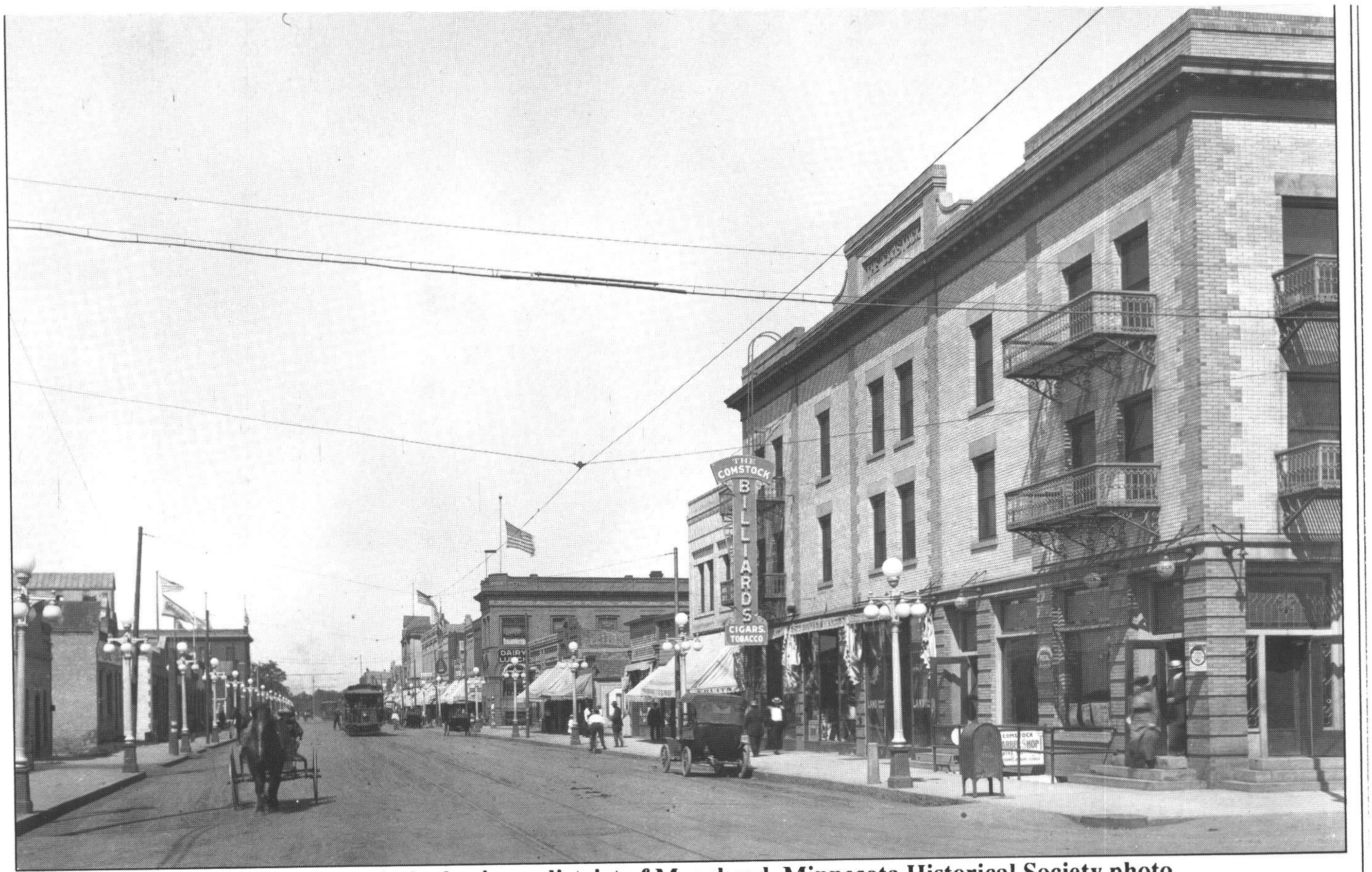

KIEFER
FARGO
FLATE
PHOTOGRA



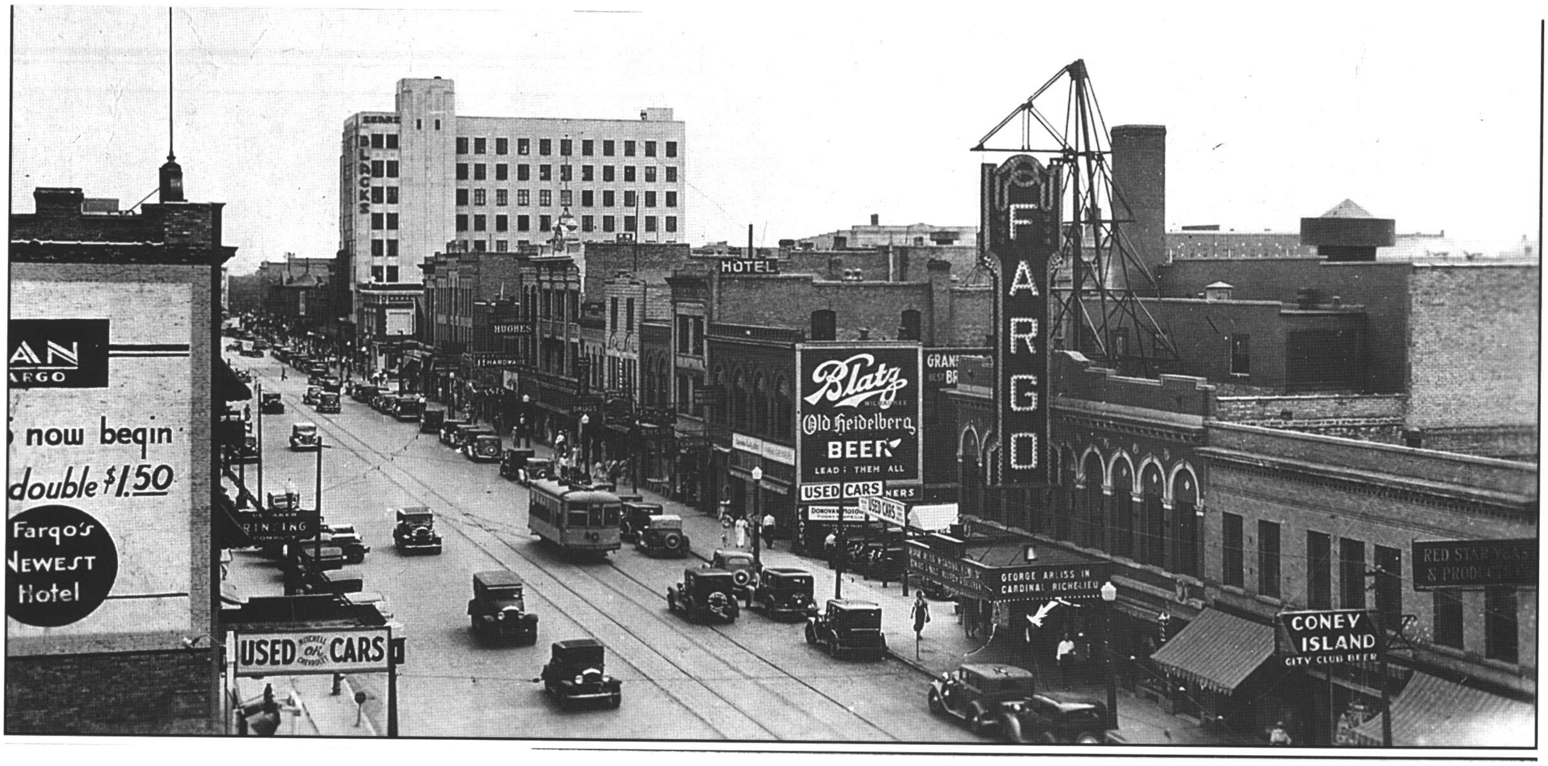
Left: We don't know the exact location, but this view typifies the 1920s single track operation through residential neighborhoods.

Below left: The Dilworth line was in its last winter when this was taken in February 1937. This gives a good idea of the open, interurban like nature of the line. Clay County Historical Society collection.



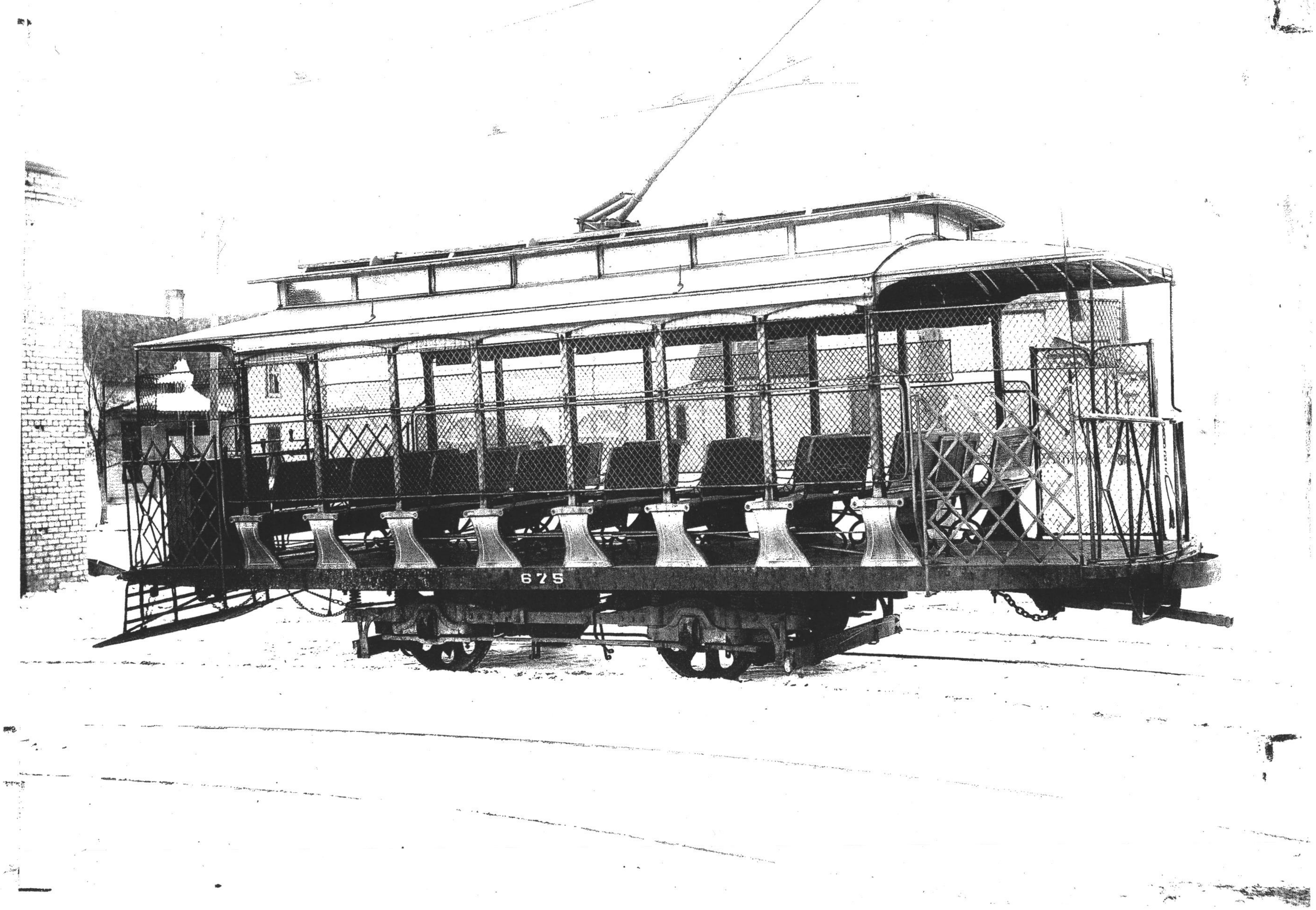

THE COMSTOCK
BILLIARDS
CIGARS. TOBACCO
DAIRY LUNCH

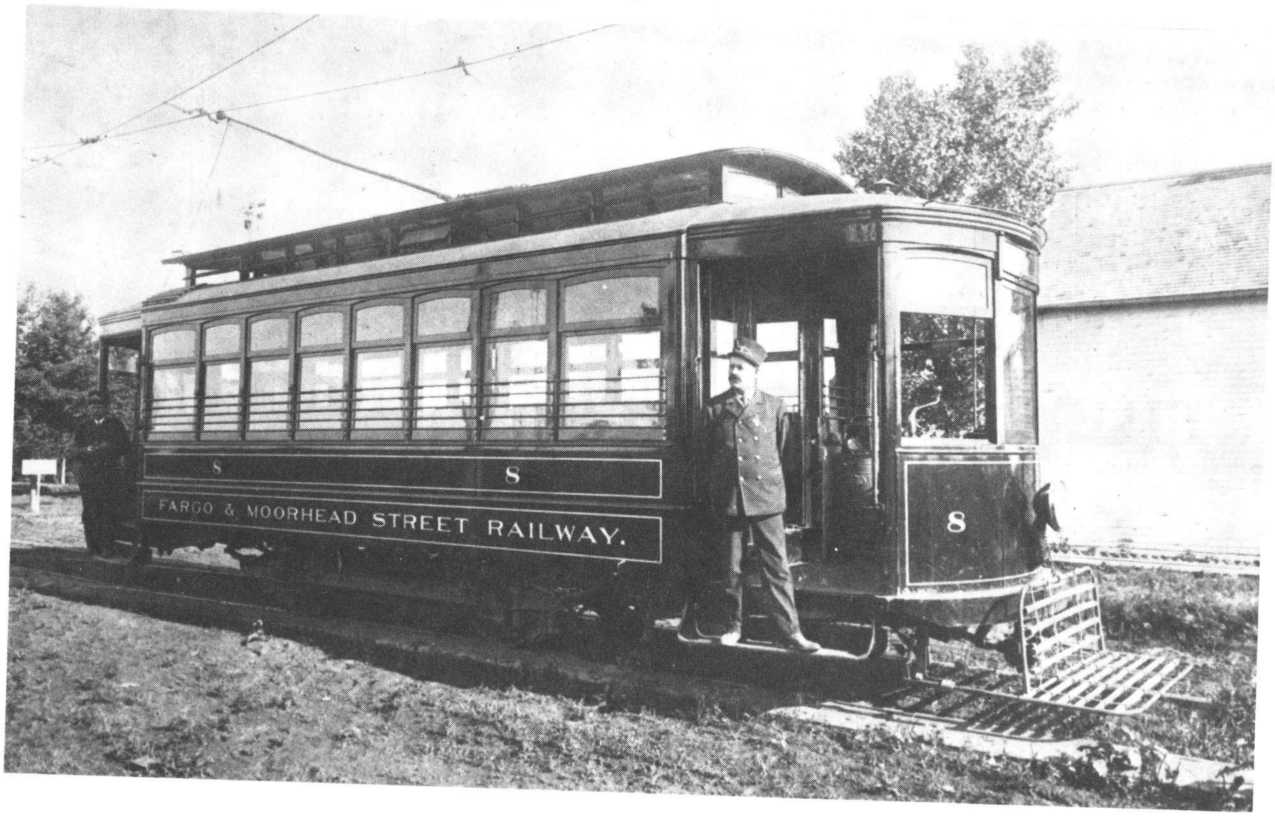
Above: An open car rolls through the business district of Moorhead. Minnesota Historical Society photo.

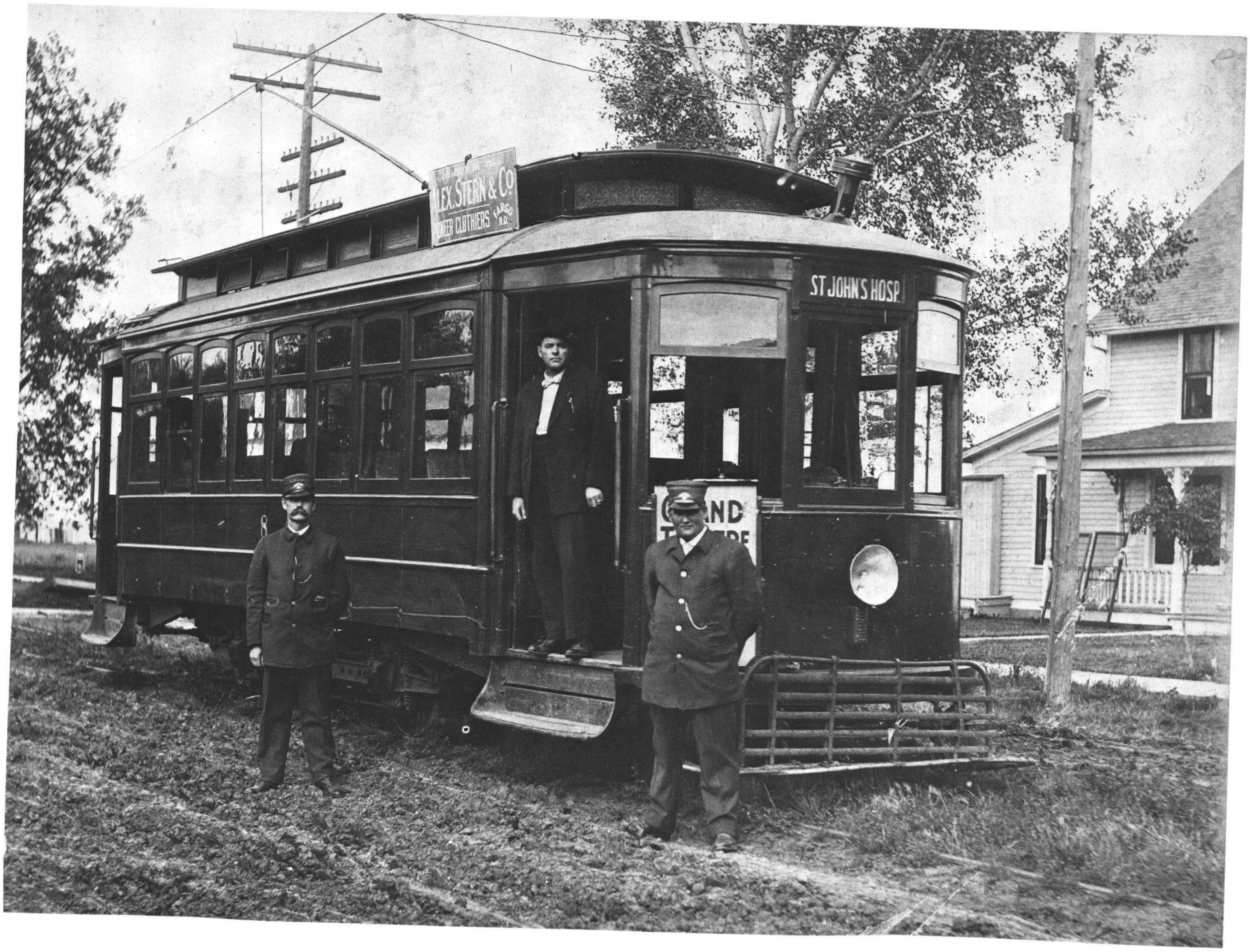

BLACKS
HOTEL
HUGHES
Blatz
Old Heidelberg
BEER
LEADS THEM ALL
USED CARS
FARGO
GEORGE ARLISS IN
CARDINAL RICHELIEU
CONEY
ISLAND
CITY CLUB BEER
now begin
double $1.50
Fargo's
NEWEST
Hotel
USED OK CARS

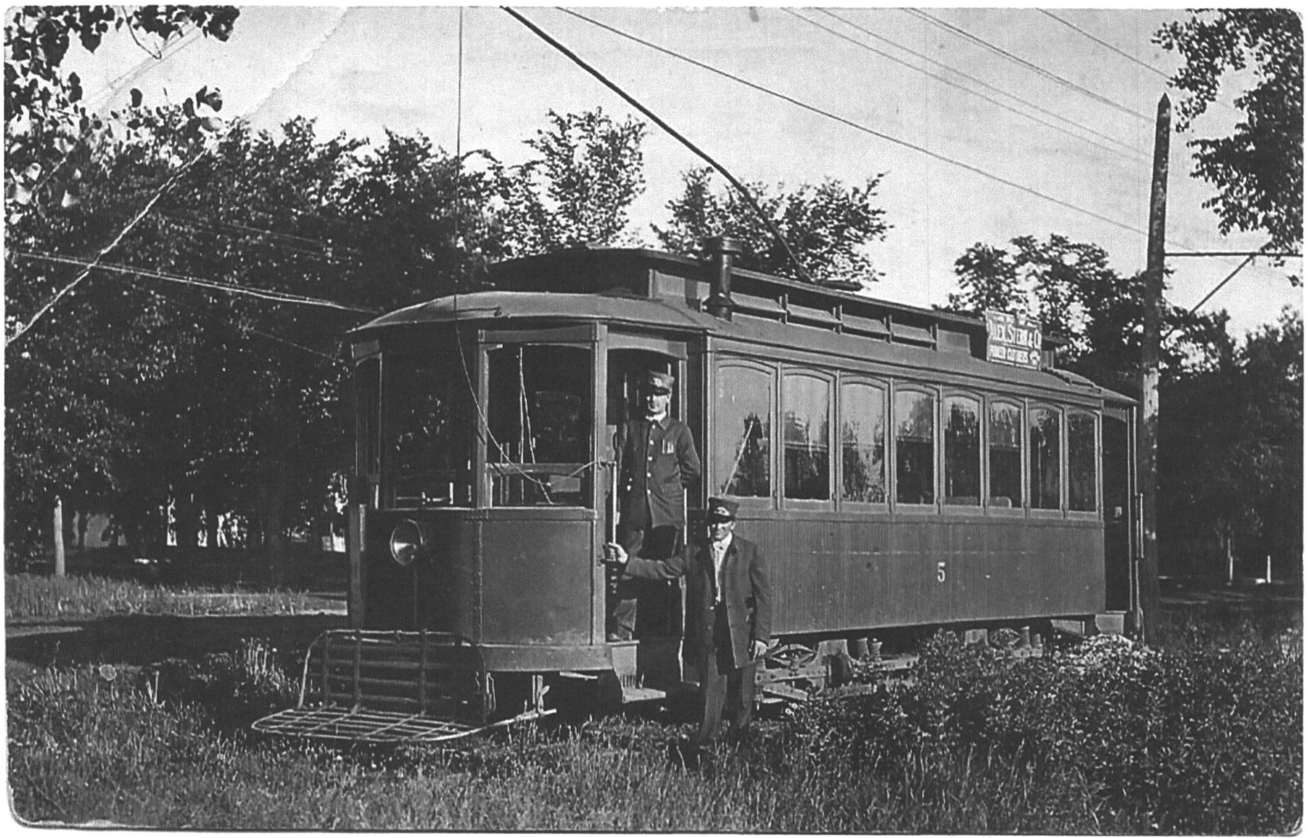
AVERY® PV119ED

BUILT 1890 - PURCHASED FROM T.C.R.T. Co. 1905-1908
DESTROYED 1920. 2 SPRAGUE MOTORS

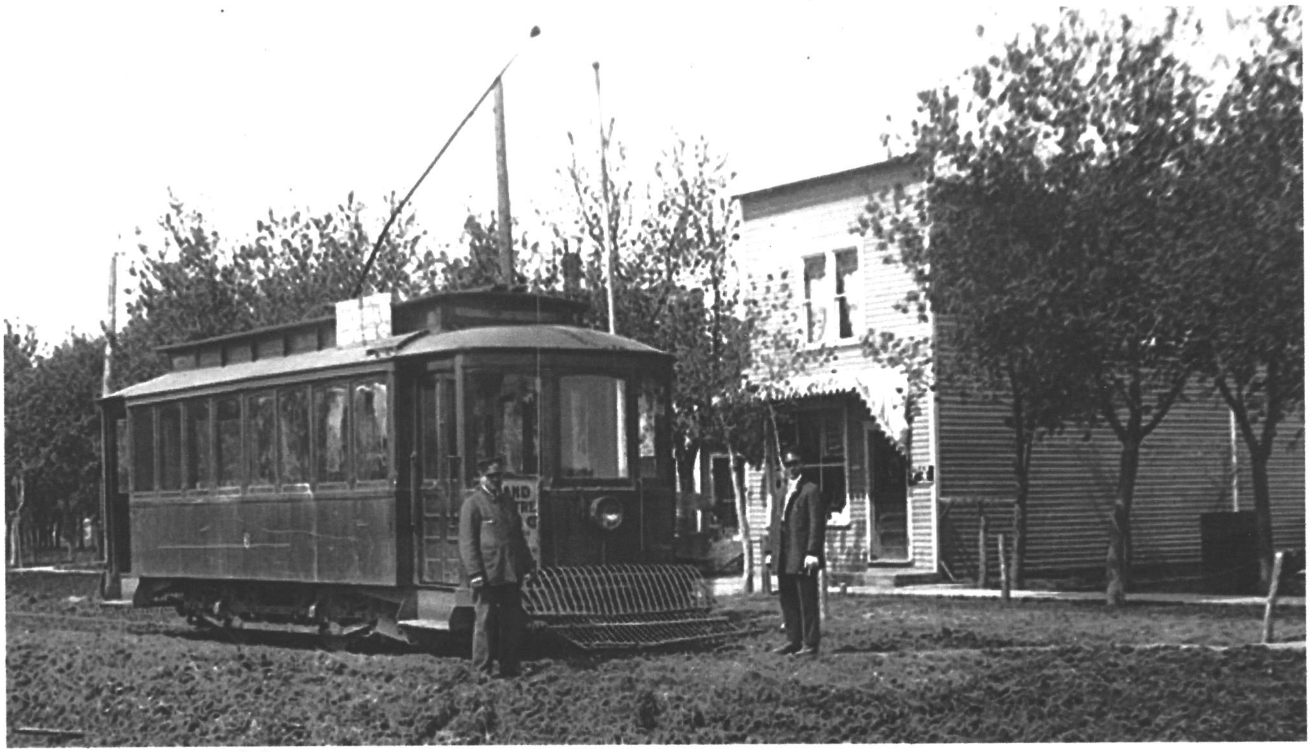



8
8
FARGO & MOORHEAD STREET RAILWAY.
8


ALEX. STERN & CO.
PIONEER CLOTHIERS
FARGO N.D.
ST JOHN'S HOSP.
8



#5



#6

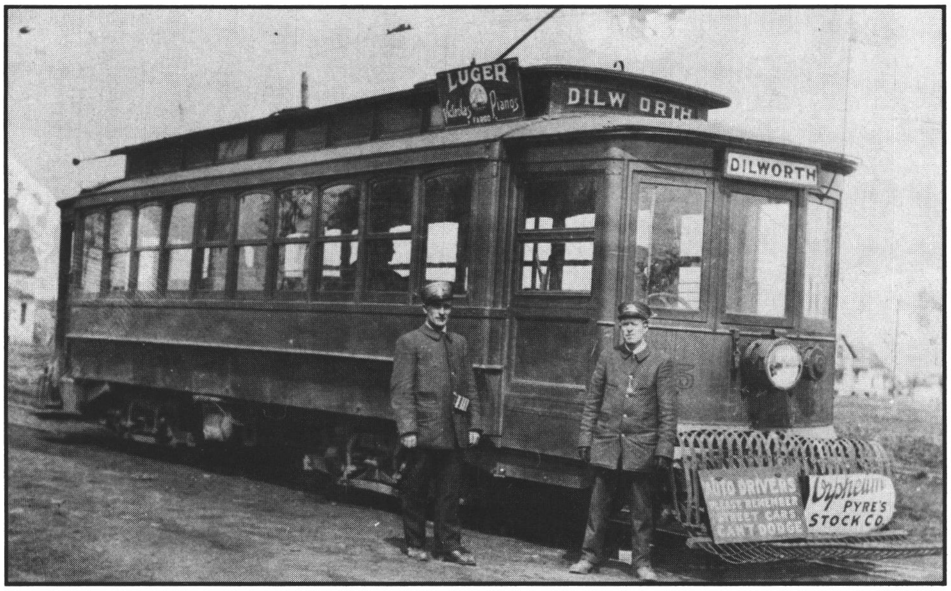
Fargo & Moorhead St. Ry. #15

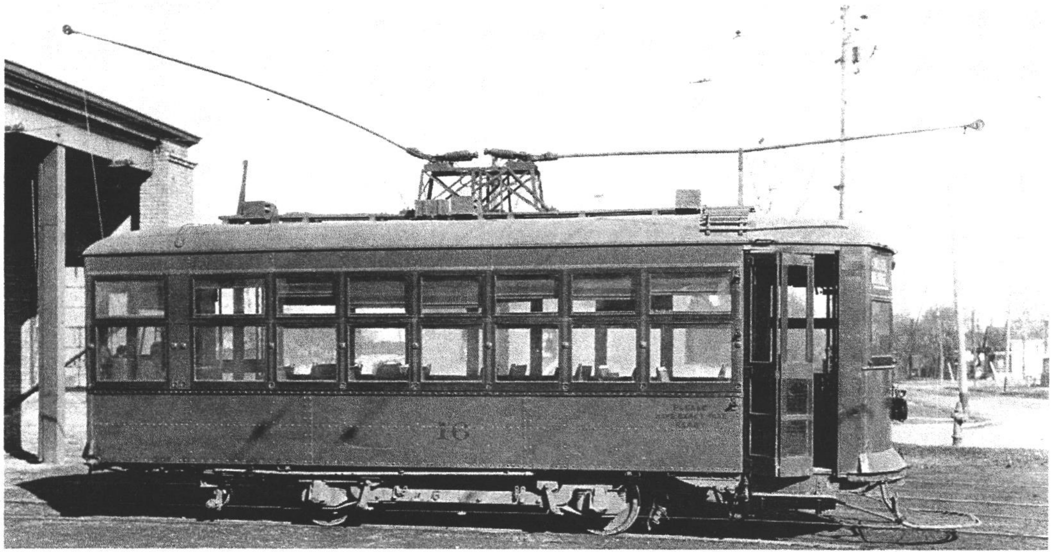
Philadelphia Rapid Transit Co. #1906 purchased 1913. Shipped May 15, 1913.

50 cars, 1900-1949, built by J. G. Brill Company, order #12402 dated 11-15-1902. Built during 1903. "Philadelphia Standard Car" Class E-42. Data as built follows. Length overall 38'7". Length over body 28'1". Platforms (incl. bumpers) 5'3" each. Truck centers 16'0". (Bolster center over body 6'1½" each.) Width overall 8'6". Height over trolley base 12'1½". Seats: 12 cross plus 4 long, capacity 40. Nuttall # trolley base in center of body. Brill 27-G1 trucks (4'0" wheelbase). Westinghouse 12-A motors. K-11 or K-12 controllers.

Rebuilt 1909 to Class E-44 (pay within type). Removable window sash rebuilt to split sash. Permanent vestibules and platform doors installed. Seating changed to 2 longitudinal (capacity 40) or 8 cross plus 4 long (Kruger type).

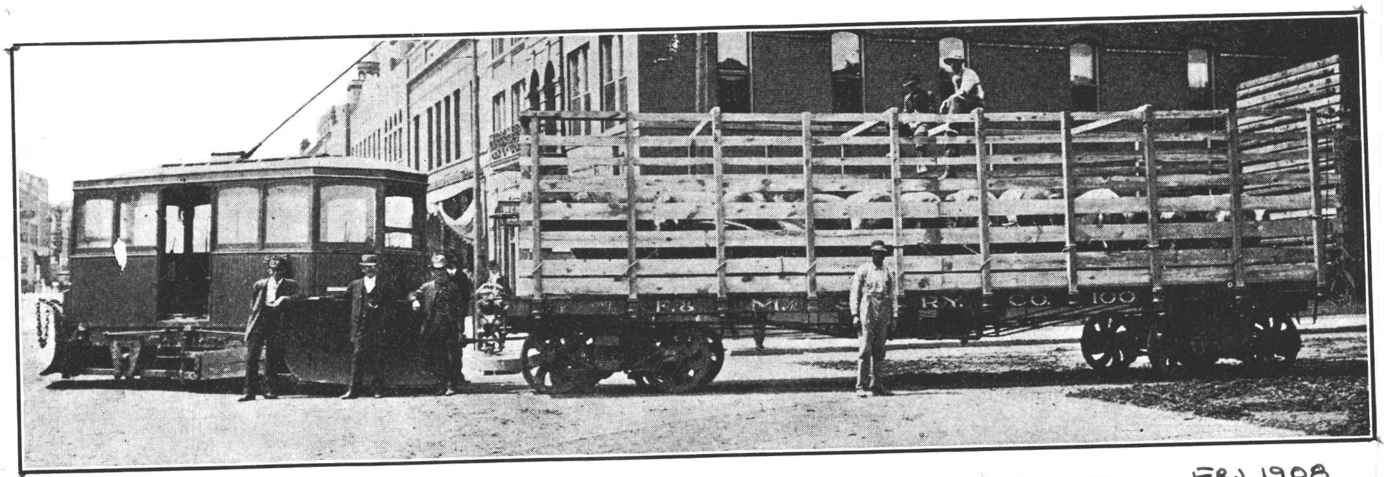
#1904-1906 sold 1913, #1906 to Fargo & Moorhead St. Ry.


LUGER
Victrolas Pianos
FARGO
DILW ORTH
DILWORTH
AUTO DRIVERS
PLEASE REMEMBER
STREET CARS
CAN'T DODGE
Orpheum
PYRE'S
STOCK CO.



3-4-1921

AN ELECTRIC RAILWAY LIVE STOCK CAR



Live Stock Car on Fargo & Moorehead Street Railway, Drawn by Snow Plow

ERJ 1908

AN ELECTRIC RAILWAY LIVE STOCK CAR

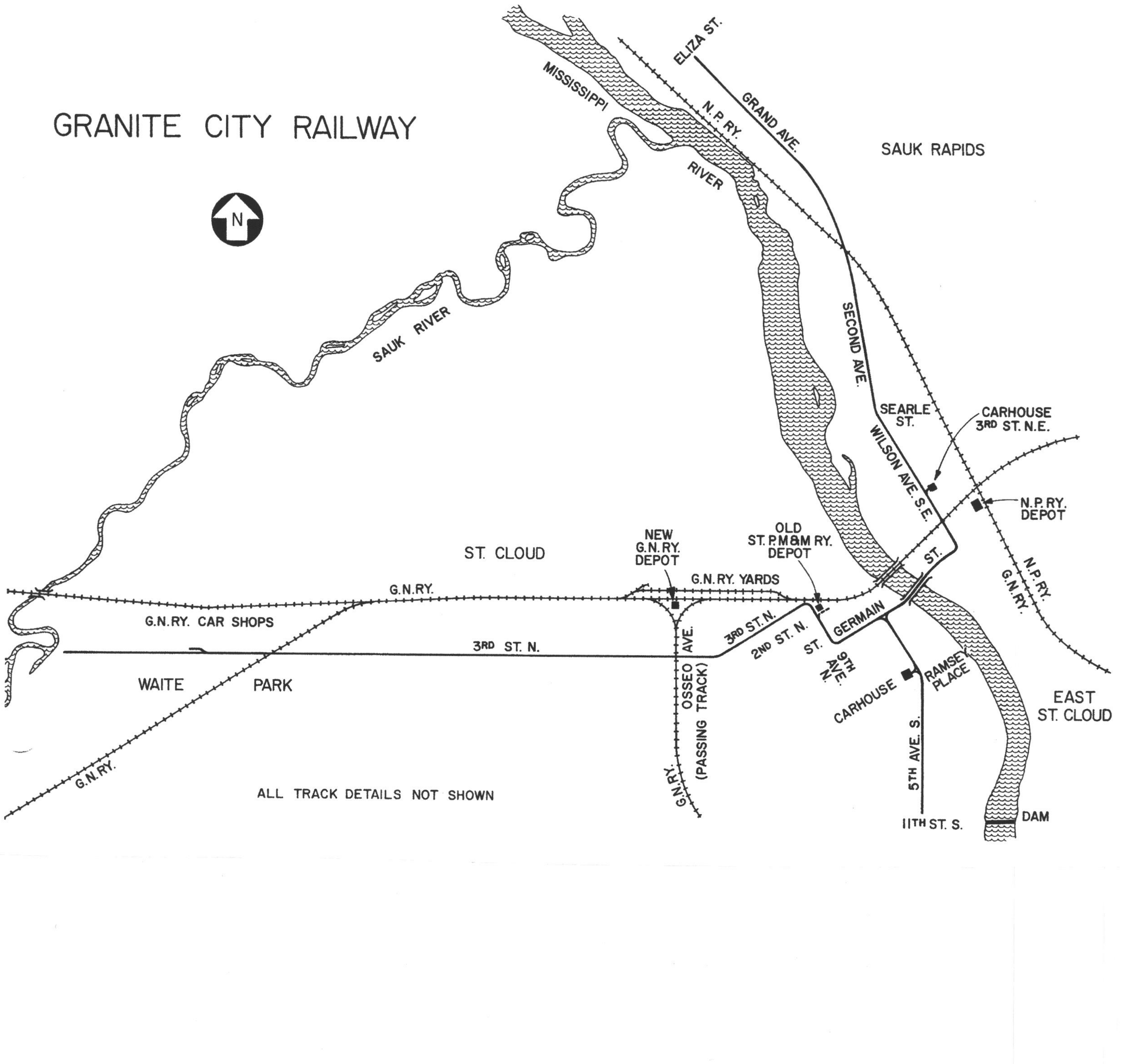
The State Fair Grounds at Fargo, N. D., are 1½ miles from the nearest railroad, and many persons have refused to exhibit on account of the long walk to and from the grounds for their stock. The Fargo & Moorhead Street Railway reaches the grounds, however, and has entered into agreement with the Fair Association to transport live stock and exhibits generally. As it was found impossible to operate the regular railroad stock car over the Fargo & Morehead Street Railway on account of the wheel flange and tread, the company purchased a railroad flat car 34 ft. 9 in. long and 9 ft. 4 in. wide for this service, and changed the wheels, using its standard wheel. The uprights are of 4-in. x 4-in. x 9-ft. fir, spaced 44 in., using tapered iron stake pockets. To these uprights 1-in. x 6-in. pine boards were nailed spaced 6 in., with the exception of the two lower boards. The first board was laid even with the car floor and the next 1 in. above it, in order to prevent the stock from getting their legs through. The rear end is hinged to form a runway for loading when dropped. It is composed of 4-in. x 4-in. x 10-in. fir, spaced 6 in., to which 1-in. x 6-in. pine boards are nailed. On top of the boards are bolted 1-in. x 2-in. strips to form a foothold and prevent slipping. This end is raised and lowered by blocks attached to each side. The top is prevented from spreading by cross pieces, bolted as shown in the illustration. Each side is made in two sections so that the runway can be removed, as the company expects to use the car to remove snow during the coming winter. The charge is $5 per car each way regardless of the load, the shipper loading and unloading at his own risk.

A Brill nose plow equipped with two GE-67 motors and lever brakes handles the loads satisfactorily. The total weight of the load shown in the illustration is 67,000 lb. The average time consumed per trip, including loading and unloading, was 45 min. As the company operates a single-track line, loading and unloading has to be done rapidly in order not to delay the regular cars.

Included here is an intact copy of *Twin City Lines*, Winter 2008 edition.

GRANITE CITY RAILWAY

AVERY®c
PV119ED



GRANITE CITY RAILWAY

N
MISSISSIPPI
RIVER
N. P. RY.
ELIZA ST.
GRAND AVE.
SAUK RAPIDS
SAUK RIVER
SECOND AVE.
SEARLE ST.
WILSON AVE. S.E.
CARHOUSE 3RD ST. N.E.
N.P. RY. DEPOT
N.P. RY.
G.N. RY.
ST. CLOUD
NEW G.N. RY. DEPOT
OLD ST. P. M.&M. RY. DEPOT
G.N. RY. YARDS
G.N. RY.
G.N. RY. CAR SHOPS
3RD ST. N.
3RD ST. N.
2ND ST. N.
ST.
GERMAIN
ST.
9TH AVE. N.
CARHOUSE
RAMSEY PLACE
5TH AVE. S.
11TH ST. S.
DAM
EAST ST. CLOUD
WAITE
PARK
OSSEO AVE. (PASSING TRACK)
G.N. RY.
G.N. RY.

ALL TRACK DETAILS NOT SHOWN

GRANITE CITY RAILWAY

St.Cloud

St.Cloud, 1917 population 10,600 persons, was an early railroad and lumbering center in addition to being the site of extensive granite quarries. The adjacent community of Sauk Rapids had a population of approximately 1,700 persons.

The Horsecar Era

Early records indicate that two separate corporations were formed in March, 1883: the St. Cloud Street Railway and the Sauk Rapids Railroad. No construction was undertaken by either company.

The St.Cloud City Street Car Co. constructed the first horsecar line in St.Cloud during 1887. Officers of the company were: C. P. McClure, president; O. W. Baldwin, vice-president; Frank Tolman, secretary; and A. G. Whitney, treasurer. The route of this line was on 5th Ave. S. from 11th St. S. to St.Germain St., on St.Germian St. to 9th Ave. N., thence north two blocks and east one block to the Great Northern Ry. passenger depot. The line was single track, 30 lb. flat rail, and opened for service October 3, 1887, using two cars. The 1890 U.S. Census reported 1.60 miles of 4'2" gauge track, two horsecars and ten horses. During the summer of 1891 negotiations were in progress with the objective of selling the company to outsiders who would electrify it and make extensions to the Great Northern Ry. car shops at Waite Park, and to Sauk Rapids.

The Electric Car Era

General History

The St.Cloud City Street Car Company was sold September 8, 1891, to Howard Levis, St.Paul, Minnesota, vice-president and treasurer of the Northwest Thomson-Houston Electric Company. The company was re-organized October 1, 1891; H. M. Byllesby was president and W. P. Johnson, secretary. Trade journals of the 1892-1893 period give names of St.Cloud Street Car Co. and St.Cloud & Sauk Rapids Railway.

It was reported on June 22,1895, that the St.Cloud Street Car Co. was sold by the sheriff to C. N. Harkins of Minneapolis to satisfy a personal property tax judgment. Another source says that in August, 1895, the St.Paul Title Insurance & Trust Co. began proceedings for appointment of a receiver by reason of default on interest payments on $125,000 of mortgage bonds. E. E. Clark was appointed receiver until a re-organization could be effected. In May, 1896, it was reported as still being in receivership, operating six cars over ten miles of track.

The Benton Power & Traction Company was incorporated in September, 1897, led by C. M. Hertig, and subsequently acquired the street railway system. This company opened a new commercial electric generating plant located on 5th Ave. N. November 7, 1900.

In 1900 Albert G. Whitney organized the Light, Heat, Transit & Public Service Company which in 1902 purchased the Benton Power & Traction Co. and the St.Cloud Gas & Electric Co. The Public Service Company was incorporated December 20, 1904, and acquired the gas and electric utilities. The Granite City Railway was incorporated January 16, 1906, and acquired the street railway.

The St.Cloud Public Service Co. was incorporated in 1915, Albert G. Whitney, president, and on June 29th purchased the Union Power Company, Public Service Company, and Granite City Railway. The Granite City Railway retained its corporate identity; trade directories used this name although equipment orders were listed in the name of St.Cloud Public Service Co. W. N. Bethel was superintendent of railways for the St.C.P.S. Co.

On August 1, 1924, Northern States Power Co. acquired the St.Cloud Public Service Co. and the Granite City Railway. Mr. Bethel reported that the most prosperous years were from 1918 through 1920. A gradual decrease in earnings was subsequently experienced, with a very rapid decrease from 1931 through 1933. N.S.P. Co. operated the street railway until its abandonment April 29, 1936.

Track and Overhead Construction

The city of St.Cloud donated right-of-way for the extension to Waite Park and three miles of track were laid on this extension during 1892. Meanwhile work was in progress electrifying the orginal line. One source reports the Waite Park line opened June 24, 1892. Another source states that the first electric cars began operating Saturday afternoon, June 30, 1892 over the line. The route reported was: 5th Ave. S. from 10th St. S. to St.Germain St., on St.Germain St. to 9th Ave., on 9th Ave. to 3rd St., and on 3rd St. through Waite Park past the Great Northern Ry. car shops to the Sauk River where a wye was located.

On June 9, 1892, it was announced that work was to begin on the extension to Sauk Rapids. This line, from the east end of the St.Germain St. bridge, was completed in October, 1892. It was not until June 6, 1894, that structural modifications to the bridge were completed and the first car crossed the bridge and operated into downtown St.Cloud.

Trade journal directories of this time period reported:
St.Cloud Street Car Co.: 1892 four miles of track; 1893 10 miles of track.
St.Cloud & Sauk Rapids Ry.: 1892-1893 three miles of track.

The 1902 U.S. Census reported first main track 7.46 miles, second main track 0.53 miles, sidings 0.67 miles, and total track 8.66 miles. The 1907 U.S. Census reported first main track 8.00 miles, sidings 0.50 miles, and total track 8.50 miles.

A map issued in 1920 by the Bradley Engineering Service showed that track was also located on: 11th St. from 5th Ave. to 3rd Ave.; 16th Ave. from 3rd St. to 5th St. (location of the new Great Northern Ry. depot); and 33rd Ave. from 3rd St. to 5th St. N.

Track mileage figures obtained from transit directories are as follows.

Year	First Track	Sidings	Total Track
1918			9.50 miles
1923-1925	8.20 miles	0.20 miles	8.40 miles
1926	7.75 miles	0.49 miles	8.20 miles
1927	7.52 miles	0.49 miles	8.01 miles
1928	7.35 miles	0.46 miles	7.81 miles
1929-1934	7.35 miles	0.36 miles	7.71 miles
1935			4.48 miles

The Sauk Rapids line was abandoned June 1, 1933. This involved the trackage from 5th Ave. S. and St.Germain St. to the end of the line in Sauk Rapids.

The very last streetcar operation took place Wednesday, April 29, 1936, when Birney car number 202 made the last run from Waite Park to 5th Ave. S. and 11th St., pulling into the carhouse at 11:15 p.m.

Power Generation and Distribution

Apparently power was purchased from the local electric utility. The first record of power plant equipment does not appear until 1906. At that time the Public Service Company's North Electric Station (Station #1) contained one General Electric Co. 550 volts D.C. 100 KW Generator for street railway purposes. The South Electric Station (Station #2) contained one Triumph 575 volts D.C. 300 KW Generator and one General Electric Co. 600 volts D.C. 90 KW Generator for street railway purposes.

In 1913 the #1 North Station installed one additional 500 volts D.C. 220 KW Generator for street railway purposes. The #2 South Station "street railway Generator was replaced by one Allis-Chalmers 400 KW 2300 volts 60 cycle machine".

Transit directories provide the following information.
1918: three units, manufactured by Triumph Electric Co. and Sprague, 550 volts D.C., 450 KW total capacity.
1923: total capacity 600 KW.

Carhouses and Offices

The first carhouse, 1892, was located on 3rd St. N. in the vicinity of the ball park. On December 12, 1898, this facility was destroyed by fire.

It was replaced by a new carhouse was built at 5th Ave. S. and Ramsey Place (319-329 5th Ave. S.).

A carhouse was built in 1892 on the Sauk Rapids line at 3rd St. N.E. and Wilson Ave. S.E.

The 1907 U.S. Census reported that two carhouses were owned.

Offices of the company were located at 507 St.Germain St.

Operations

The Waite Park line which opened in 1892 offered twenty-minute service requiring three cars. A fourth car was the spare car.

Three lines were operated during 1893:
1. 5th Ave. S. and 11th St. to Waite Park;
2. 5th Ave. S. and 11th St. to the Great Northern Ry. depot;
3. Sauk Rapids.

Trailers were used on the Waite Park line as the Great Northern Ry. employed 800 men at their car shops.

As of November, 1923, fares were reported as 5¢, 7¢ and 10¢ cash, with 6.4¢ and 7¢ tickets. In 1936, the last year of operation, the fare was 10¢ from 11th St. and 5th Ave.S. to 3rd St. N. and 37th Ave. (the city limits), with an additional 5¢ to Waite Park.

Equipment

The first four cars were single-truck, closed passenger motor cars built by the Northern Car Company, Robbinsdale, Minnesota, in 1892. Three cars were needed for twenty-minute service on the first line which opened June 30, 1892.

St.Cloud Street Car Co. 1892: four motor cars; 1893: eight motor cars. St.Cloud & Sauk Rapids Ry. 1892-1893: two motor cars. In May, 1896, the St.Cloud Street Car Co. was reported as still in receivership operating six cars over 10 miles of track.

A photograph taken at the ball park in the 1890's on a weed-grown right-of-way shows cars lettered for the St.Cloud Street Car Co. There were three single-truck, deck-roof, closed six-window body cars, and one single-truck, turtle-back arch roof open car. All have the old-style trolley base. No numbers are visible.

On December 12, 1898, the carhouse on 3rd St. N. was destroyed by fire together with four passenger cars and one snow plow. Two cars in the east barn (one an open car) and one car not in the barn were saved.

The 1902 U.S. Census reported seven closed passenger cars and one open passenger car; of these seven were motorized and one was a trailer.

During 1903 some equipment was purchased second-hand from the Duluth Street Railway Co.
Ex 33 and 36: single-truck, closed passenger motor cars built by LaClede Car Co. in 1891.
Ex 105,108,109: single-truck, closed passenger cars (without motors) built by Pullman's Palace Car Co. in 1890 for the Superior Rapid Transit Railway.

During 1907 some equipment was purchased second-hand from the Twin City Rapid Transit Co.
Ex 570,577,579,581: single-truck, closed passenger motor cars built by J. M. Jones' Sons Co. in 1888 and rebuilt by TCRT in 1892 to 22 ft. length.

The 1907 U.S. Census reported 15 closed passenger cars and two snow plows. Of the 17 total cars, fourteen were motorized (two motors each) and three were trailers. Trailers were used on the Waite Park line.

Additional equipment was purchased second-hand from the Duluth Street Railway in 1910.
Ex 69,71,76,77: single-truck, closed passenger motor cars built by LaClede Car Co. 1893.

Equipment orders reported in the Electric Railway Journal were as follows.
1910: 4 city cars, 37'0" long, McGuire-Cummings single truck, from St. Louis Car Co. (1)
1911: 1 work car, 22'0" long, single truck, from McGuire-Cummings Mfg. Co.
1912: 4 city cars, 22'0" long, McGuire-Cummings single truck, from Jones' Sons Car Co. (2)
(1) Probably canceled; Duluth St. Ry. cars purchased instead.
(2) Probably canceled; International Railways cars purchased instead.

Four cars were acquired second-hand about 1911-1912 from International Railways, Buffalo, New York. Ex 469,480,483,484 were double-truck, double-end, deck-roof, 24 ft. closed bodies built by J. G. Brill Company on order number 6976, 6-26 ~~January~~,1896, for the Crosstown Railway, Buffalo. Brill 27-F trucks for these cars were acquired from Cleveland Railways, Cleveland, Ohio. The cars were probably re-numbered 90-93. One was used on the Sauk Rapids line in the late 1920's.

BUILT WITH
BRILL 22
TRUCKS

Two city cars, 34 ft. long, single-truck, one-man operated, semi-steel construction, were purchased from St.Louis Car Company, under order number 1083 dated January 28, 1916. These cars were numbered 100-101.

According to the Electric Railway Journal four city cars, 34 ft. long, were ordered during 1918. St.Louis Car Company order number 1147 dated May 16, 1917, carried the description "repair four cars" but listed only two numbers, "80-81". This may be the source for the ERJ entry.

Two single-truck, double end, Birney cars, numbers 201-202, were built by American Car Company in April, 1919, equipped with General Electric Co. motors and a Brill 78-M1b truck. Order 1188

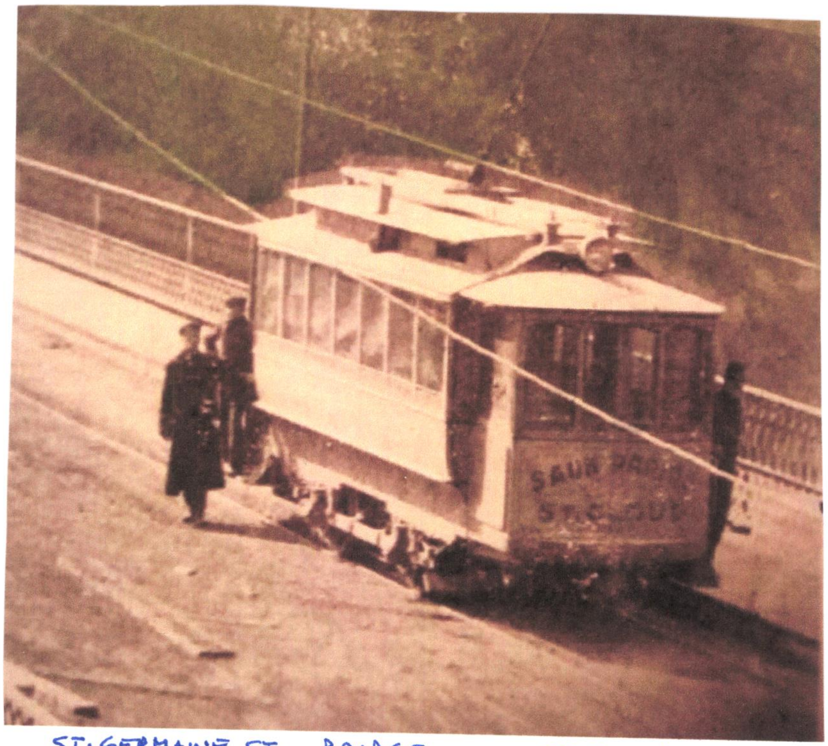
27-9½ lng 7-8 wide

Bldr Photo
4-24-19

Equipment owned information from transit directories is listed following.
1918: 17 motor cars and 3 other cars.
1923-1925: 19 passenger motor cars (all one-man operated) and 1 service motor car (snow plow).
1926: 10 passenger motor cars and 1 service motor car.
1927: 9 passenger motor cars (7 active, 1 extra) and 1 service motor car.
1928: 10 passenger motor cars (8 active, 2 extra) and 1 service motor car.
1929: 8 passenger motor cars and 1 service motor car.
1930-1934: 9 passenger motor cars and 2 service motor cars.
1935: 4 passenger motor cars and 2 service motor cars.

According to the local newspaper the four remaining cars comprised one large 22-ton car, two small 6-ton cars, and one 12-ton car. They were numbered 101, 201, 202 and 93. In addition there were one snow sweeper and one work car.

The fate of these cars is unknown except that 101 was sold to the local Boy Scouts for conversion into a lodge.



ST. GERMAINE ST. BRIDGE ST. CLOUD

ELECTRIC TRACTION APRIL 1919

The Granite City Railway Company, St. Cloud, Minn., recently purchased two safety cars built by the American Car Company, and four double truck cars, built by the Kuhlman Car Company, the specification of which include the following:

Name of road	Granite City Ry. Co.
Number of cars	2
Date order was placed	March 1, 1919
Date of delivery	April 15, 1919
Builder of car body	American Car Co.
Type of car	Safety
Seating capacity	32
Weight (total)	7 tons
Axles	¾ in.
Buzzers	Consolidated Car Heating Co.
Desination signs	Hunter
Door operating mechanism	Air
Fare boxes	Cleveland
Heaters	Consolidated Electric
Headlights	Golden Glow
Motors	G. E.
Registers	International Single
Trucks (type)	American Car Co.
Wheels	26 in.

Number of cars	4
Date order was placed	March 1, 1919
Date of delivery	April 15, 1919
Builder of car body	Kuhlman Car Co.
Type of car	Double truck
Seating capacity	40
Weight (total)	20 lbs.
Length over bumpers	47 ft. 10 in.
Brakes	Air
Buzzers	Consolidated
Heaters	Peter Smith
Motors	Westinghouse
Paint	Green
Registers	International
Seats (style)	Longitudinal

GRANITE CITY RAILWAY

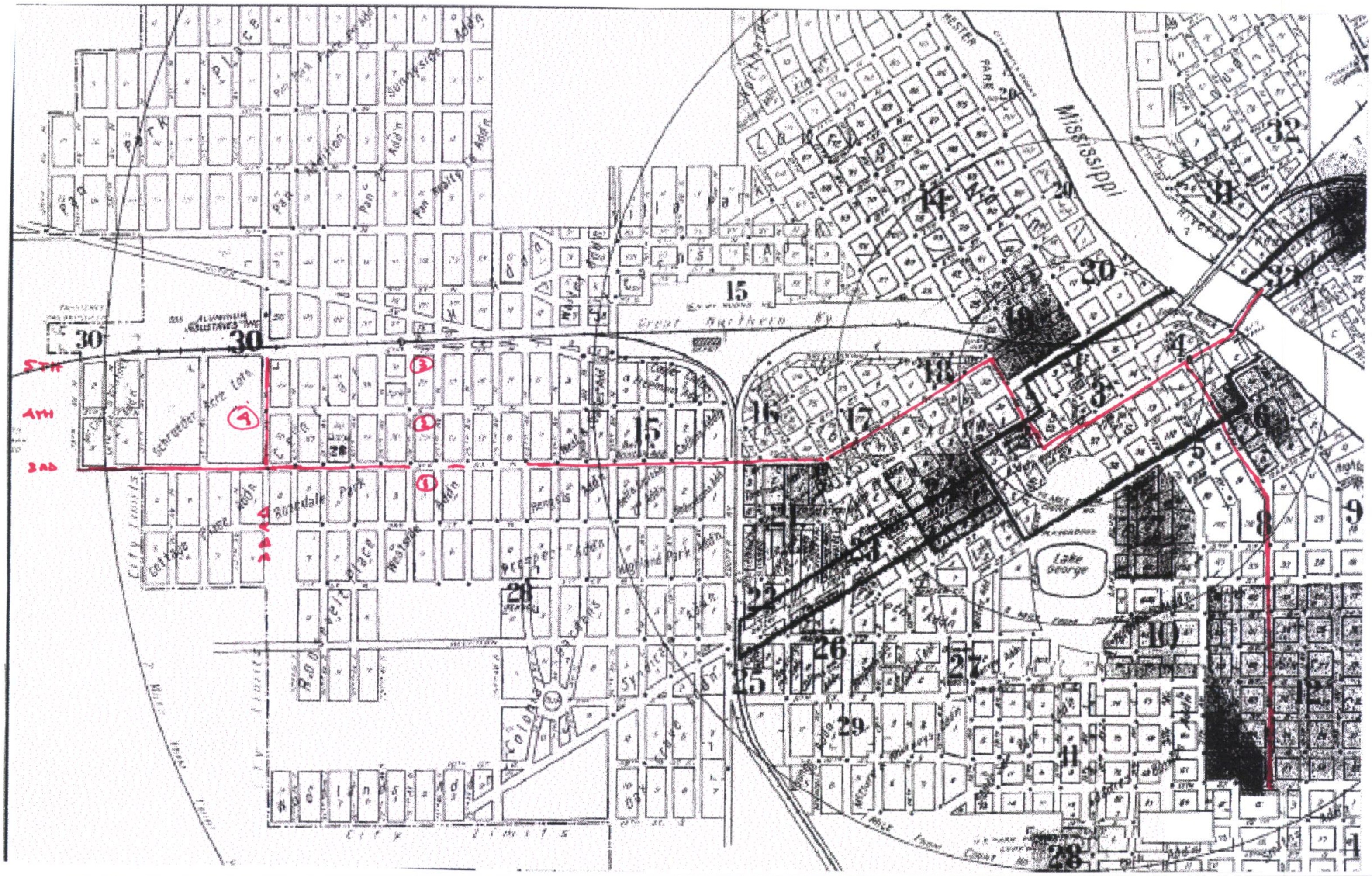
ADDENDA

The St.Cloud City Street Car Company was incorporated 2-28-1887. The franchise was granted 4-9-1887 for thirty years. The four officers were directors. There were three additional directors: R. L. Gale, L. T. Troutman, and H. E. Tolman. The company contracted with W. H. Hewitt, Superior, Wisconsin, for construction and equipment. Work began 9-10-1887. The first equipment consisted of two horsecars.

In 1891 the Northwest Thomson-Houston Company acquired the right-of-way to extend the line west from the Great Northern Railway station on 3rd St. into Waite Park, past the G.N. Ry. shops, to a wye near the Sauk River. The official opening to Waite Park occurred 6-24-1892. Three cars provided service with a fourth car in reserve. Running time was 20 minutes.

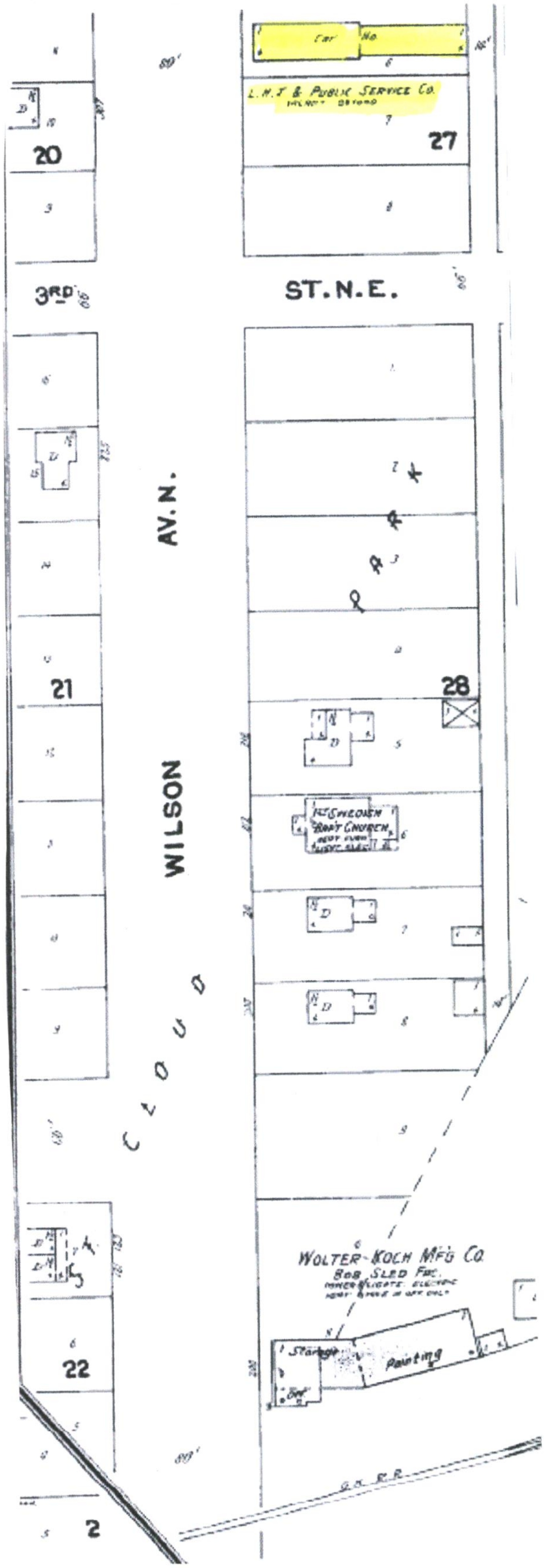
At one time the railway operated 19 passenger cars, one work car, and one snow plow.

On the last day of operation a parade included three streetcars. The newspaper accounts are unclear as to the very last run. It appears as if #202 with motorman Andy Fowler was next to the last run. Fowler was a well-known veteran employee and it appears that it was his last run that got the publicity. The article indicated that Fowler's car stopped at **21st St.** and changed ends. The headlight of the Waite Park car appeared in the distance. Those who wanted to ride the very last car had to get off #202 and transfer to the inbound Waite Park car. Andy Fowler with #202 then pulled into the carhouse. It is unclear if #202 or the following car pulled-in at 11:15 p.m.

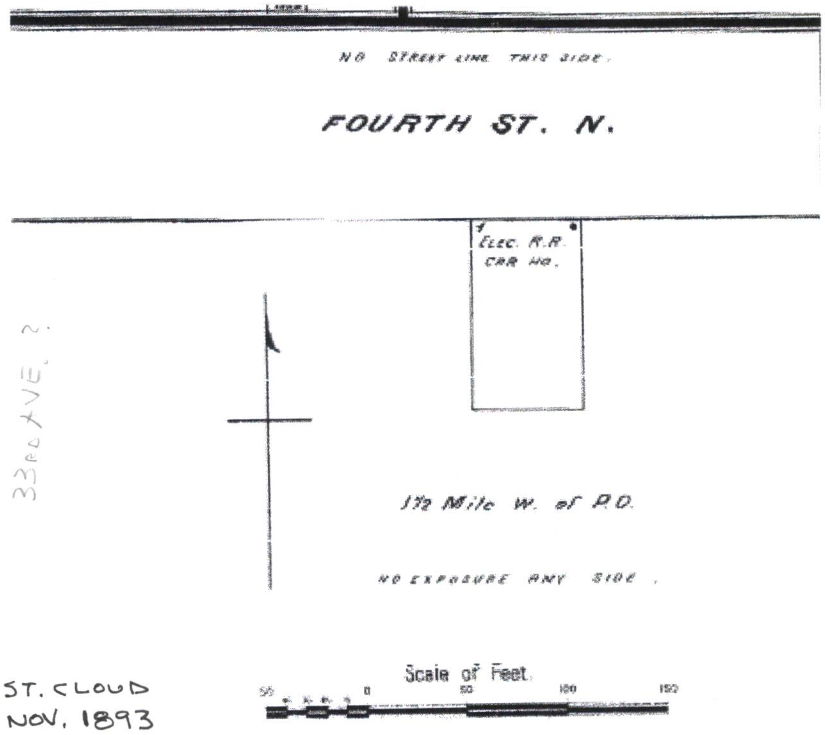


5TH
4TH
3RD
30
30
Schroeder Acre Lots
④
③
②
①
Rosedale Park
Roosevelt Place
Great Northern Ry
Mississippi
Lake George
City Limits
15
15
16
17
18
19
20
25
26
27
28
29
31
32
10
12

SAUK RAPIDS DEC 1904



Car Ho.
L. H. T. & Public Service Co.
27
20
3RD ST. N.E.
WILSON AV. N.
CLOUD
PARK
21
28
1st Swedish Bapt Church
22
2
Wolter-Koch Mfg Co
Bob Sled Fac.
Storage
Painting
G. N. R.R.



NO STREET LINE THIS SIDE.
FOURTH ST. N.
Elec. R.R. Car Ho.
1½ Mile W. of P.O.
NO EXPOSURE ANY SIDE.
Scale of Feet.
50
0
50
100
150

33rd AVE ?

ST. CLOUD
NOV. 1893
JAN 1898

ST. CLOUD, MINN.

Population in 1880, 2,462, in 1890, 7,686, in 1900 (estimated), 10,000.

Benton Power & Traction Co.—This company is the successor by purchase of the St. Cloud City Street Car Co., and is now operating St. Cloud & Sauk Rapids Electric Rys. In Feb., 1901, E. E. Clark was appointed receiver after foreclosure proceedings.

Capital Stock, $50,000.

Funded Debt, $18,000.

Plant and Equipment.—Miles of track (electric), 7.33; gauge, 4 ft. 8½ in.; 40 lb. T rail; 8 motor cars; Gen. Elec. dynamos and motors, St. Louis cars.

Officers.—Receiver E. E. Clark, Pres. C. M. Hertig, Treas. & Supt. E. E. Clark, Elecn. F. B. Daten.

Date of information, Feb., 1901. 2

ST. CLOUD.

Population in 1880, 2,462, in 1890, 7,686, in 1900 (estimated), 10,000.

Granite City Railway Co.—This company is the successor (by purchase Apr. 1, 1906) to the Benton Power & Traction Co. and is also operating St. Cloud & Sauk Rapids Electric Rys.

Capital Stock, $100,000.

Funded Debt, $50,000.

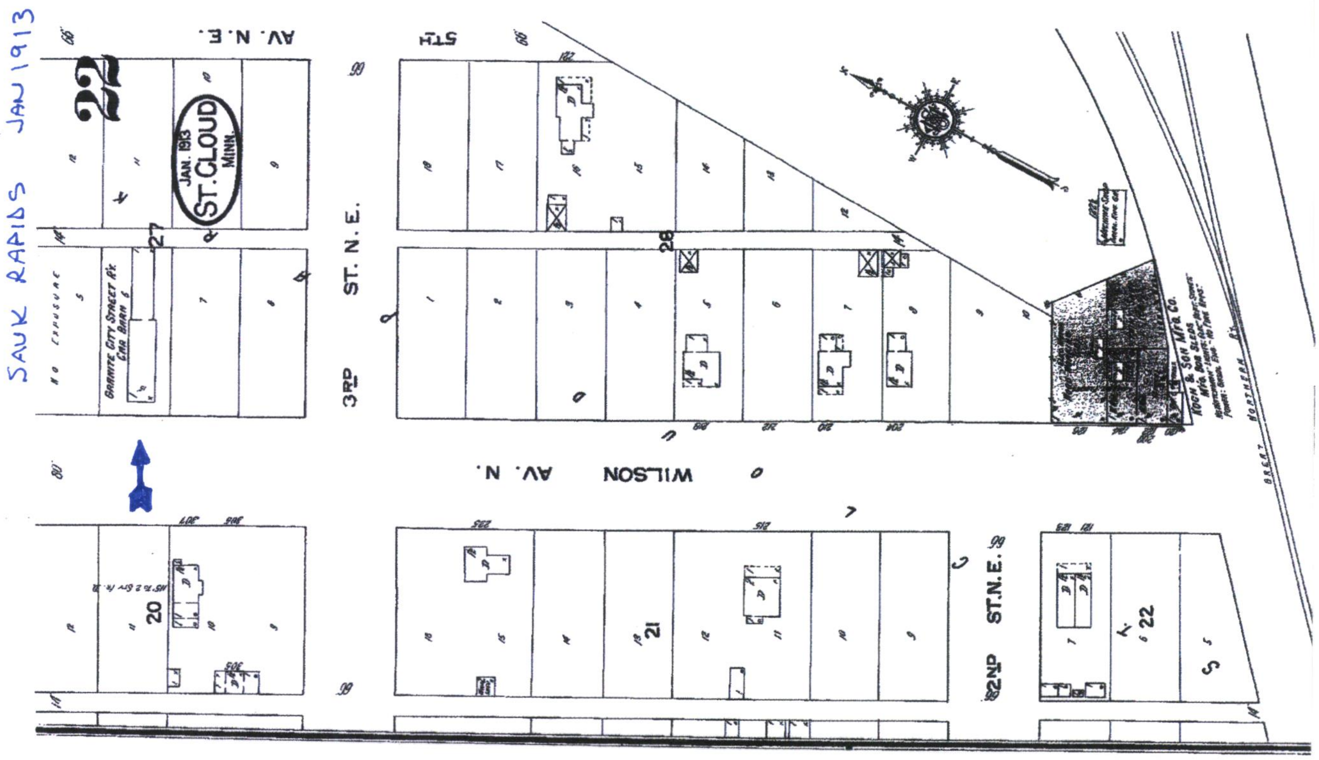
Gross income, 1907, $27,098.

Plant and Equipment.—Miles of track (electric), 8; gauge, 4 ft. 8½ in.; 40 lb. T rail; 11 motor cars; power rented from The Public Service Co.

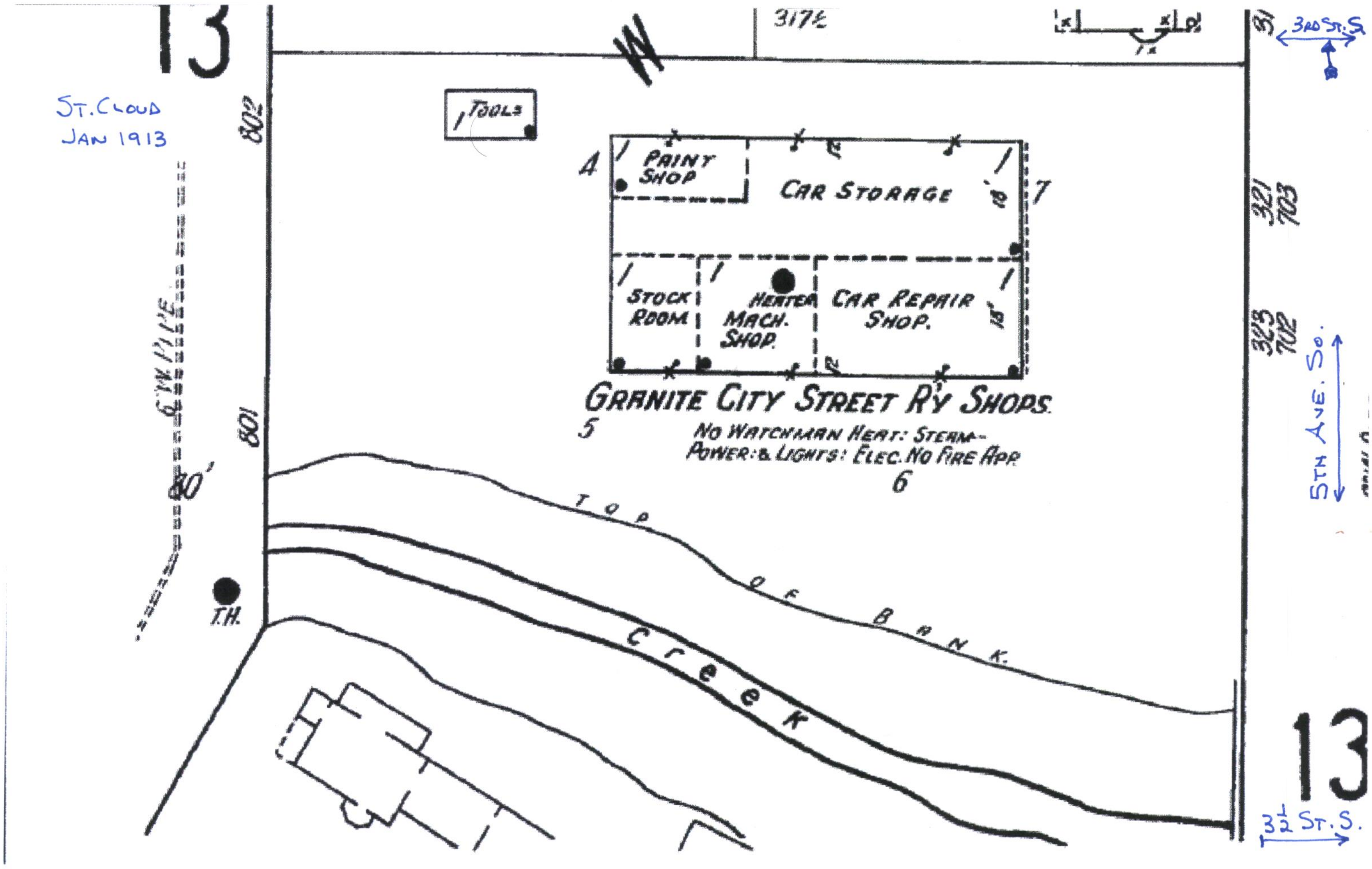
Officers.—Pres. A. G. Whitney; V. Pres. R. L. Gale; Sec., Treas., Gen. Man. & Pur. Agt. E. E. Clark; Elec. F. B. Doten.

General Office and Repair Shops, St. Cloud, Minn.

Date of information, Apr., 1908. 2


22
JAN. 1913
ST. CLOUD
MINN.
AV. N.E.
5TH
ST. N. E.
3RD
WILSON AV. N.
2ND ST. N.E.
Granite City Street Ry. Car Barn
No Exposure
20
21
22
27
28
Roch & Son Mfg. Co.
Great Northern Ry.

SAUK RAPIDS JAN 1913

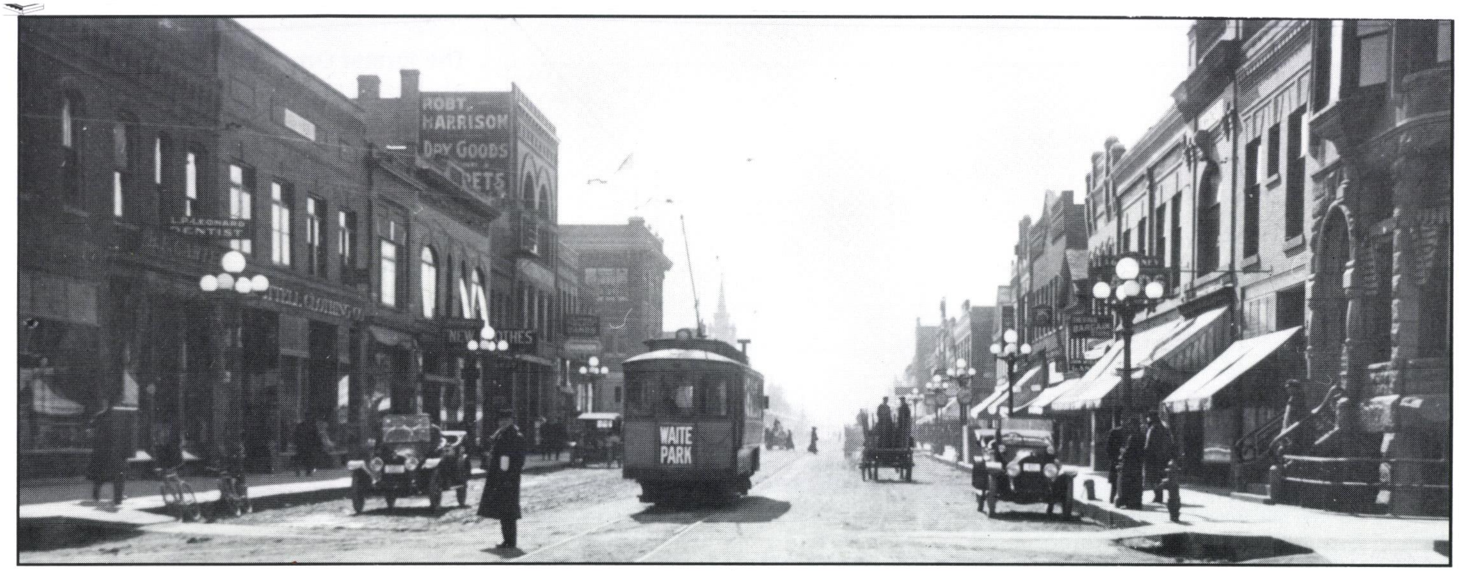

13
W
317½
TOOLS
PAINT SHOP
CAR STORAGE
STOCK ROOM
HEATER
MACH. SHOP
CAR REPAIR SHOP.
GRANITE CITY STREET RY SHOPS
No Watchman Heat: Steam-
Power: & Lights: Elec. No Fire App
4
5
6
7
802
801
80'
6" W. PIPE
T.H.
TOP OF BANK
Creek
321
703
323
702
13

ST. CLOUD
JAN 1913

3RD ST. S

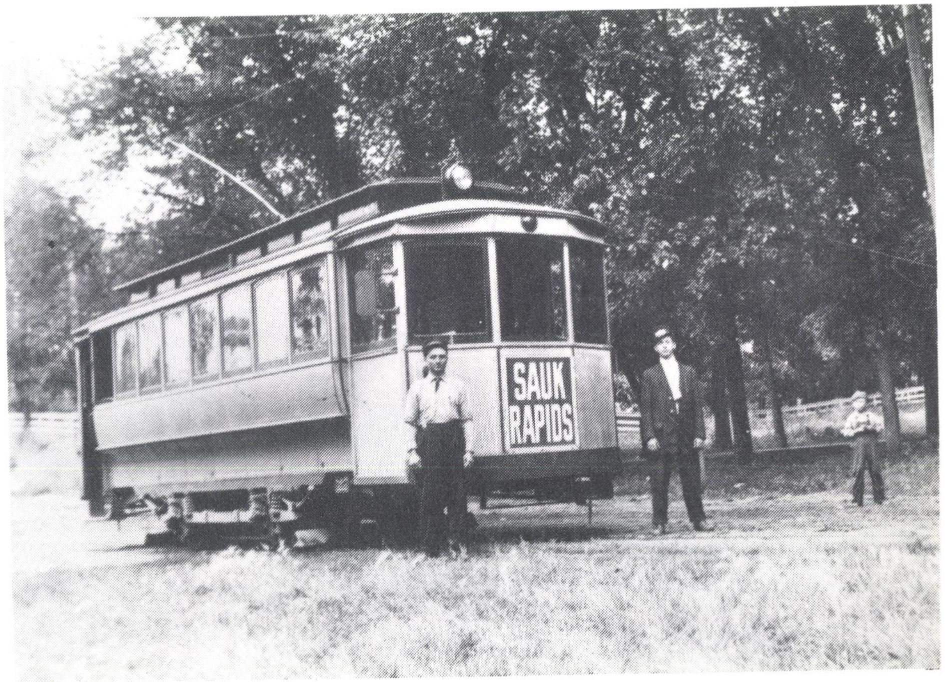
5TH AVE. SO.

3½ ST. S.

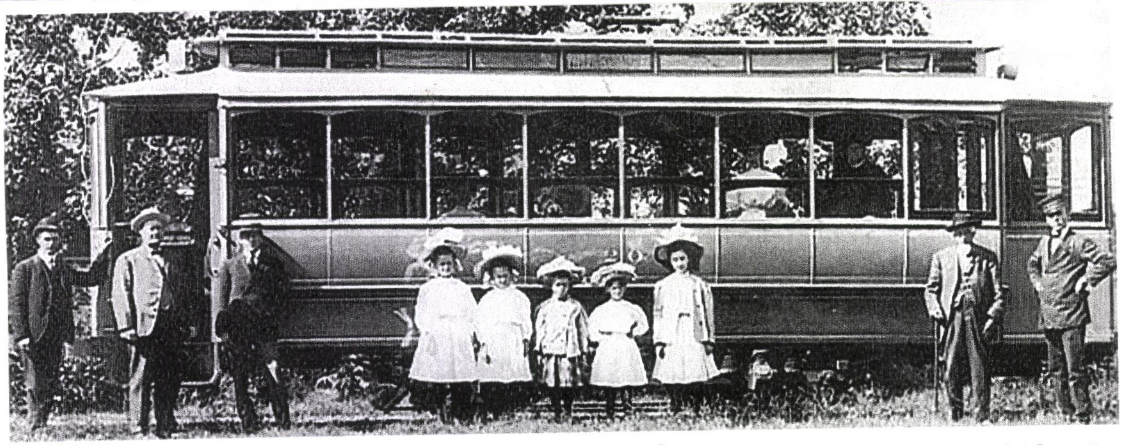

ROBT. HARRISON
DRY GOODS
L.P. LEONARD DENTIST
WAITE PARK

Four of #78's sisters were sold to St. Cloud's Granite City Ry. in 1910. One of them is eastbound in the 500 block of St. Germain Street. Stearns County Historical Society collection.

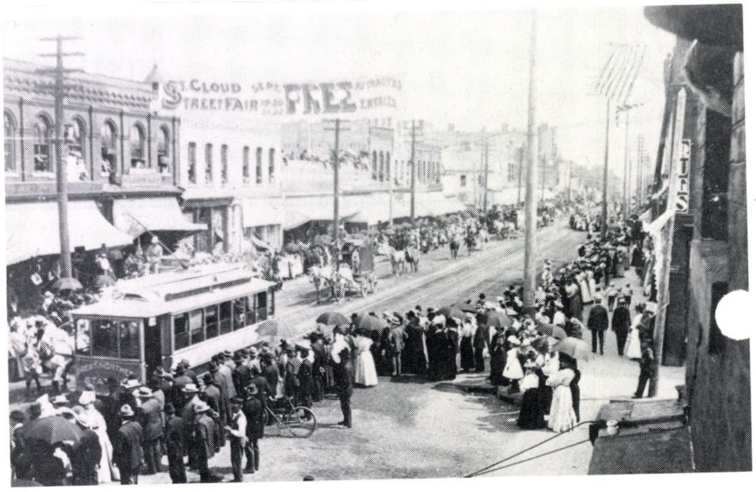
NORTHERN SHOPS
8


SAUK RAPIDS

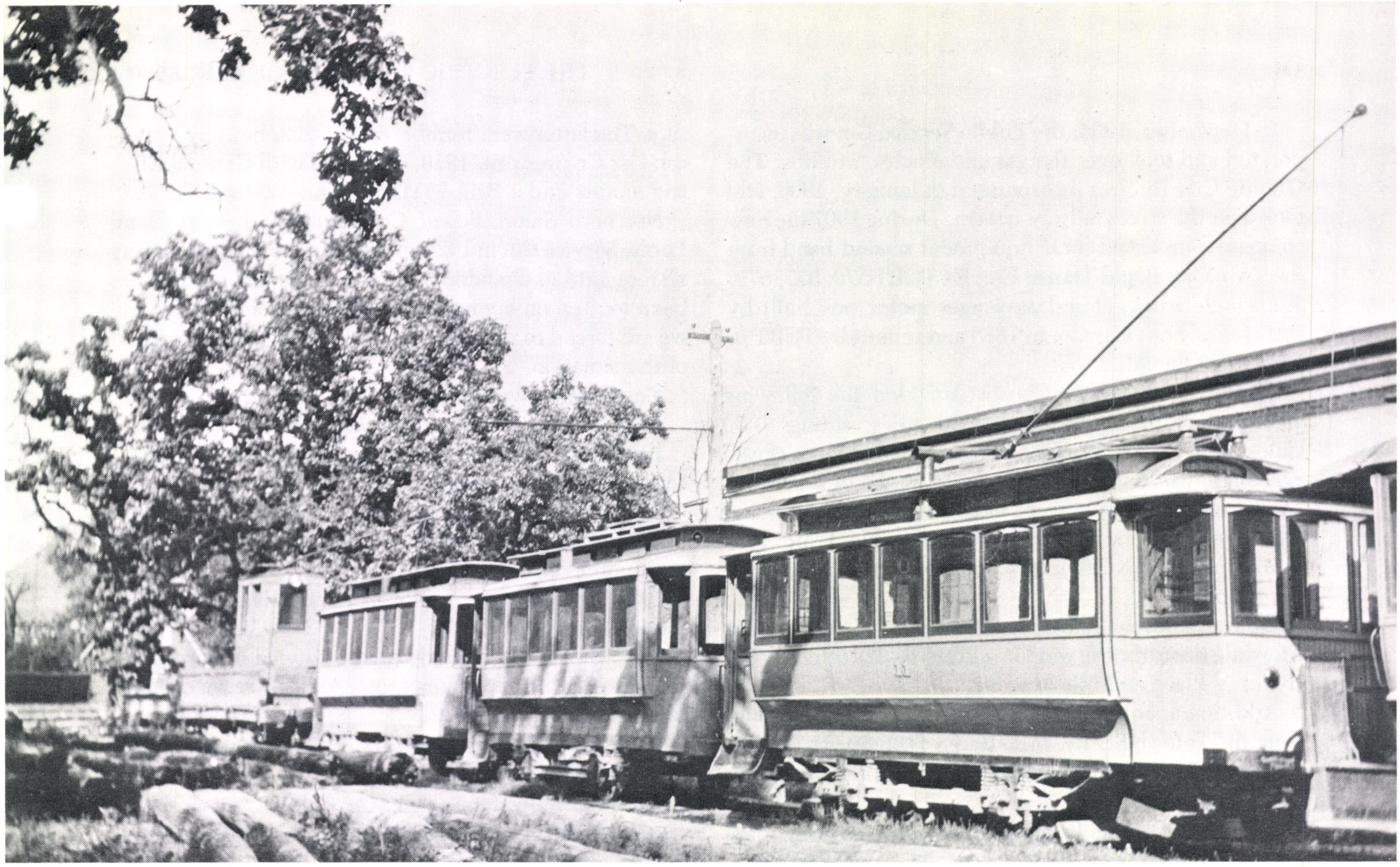
In 1910, Granite City Railway of St Cloud bought four cars, Nos 69, 71, 76 and 77, from Duluth Street Railway, all sisters to MTM's No 78. One of them at St Cloud around 1920 shows [redacted] added head and tail lights and unsubtle destination sign. Postcard Photo Courtesy of Ken Fletcher.



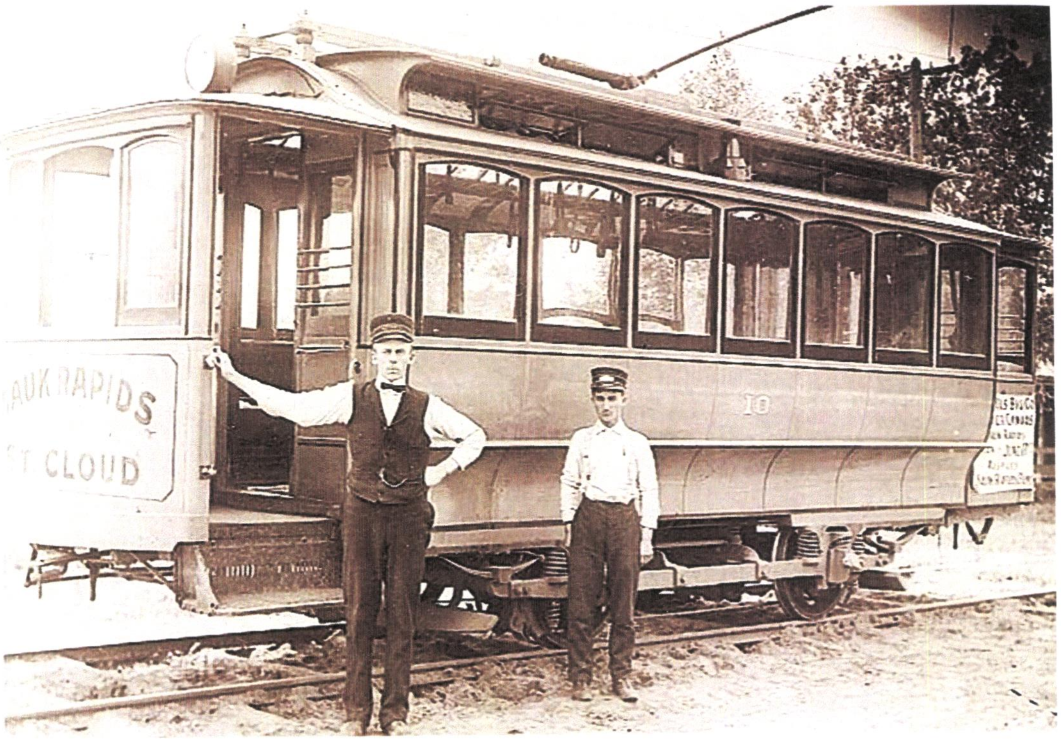
#20 ONE OF ExTCRT 570, 577, 579, 581   22 FT CLOSED REBUILT



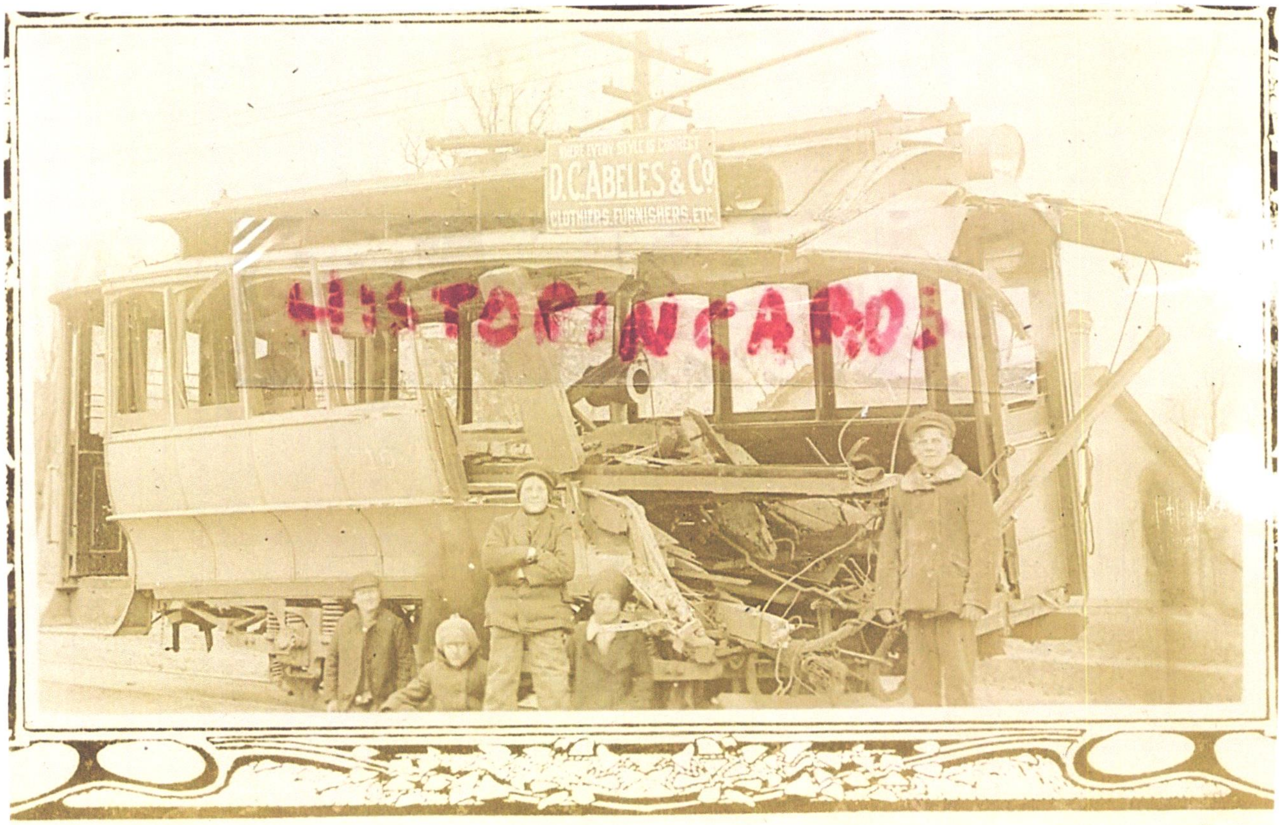
Above: A car on the "Great Northern Station" line operates in circus parade crowds on St. Germain St., St. Cloud (Frank Butts collection)



Above: A line of single truck passenger cars and a work car at the St. Cloud carhouse about 1915. The car at right is #11. (Northern States Power Co.; Ken Fletcher collection)

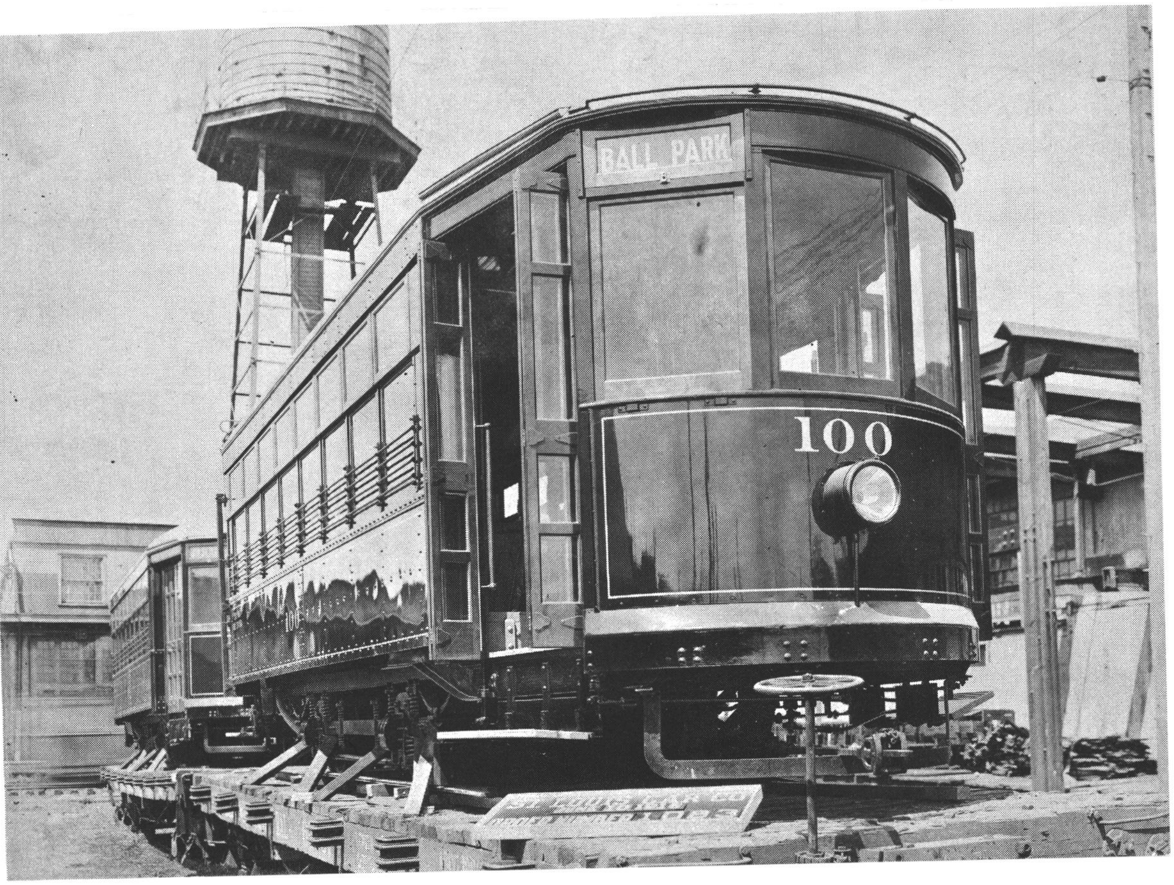

SAUK RAPIDS
ST. CLOUD
10

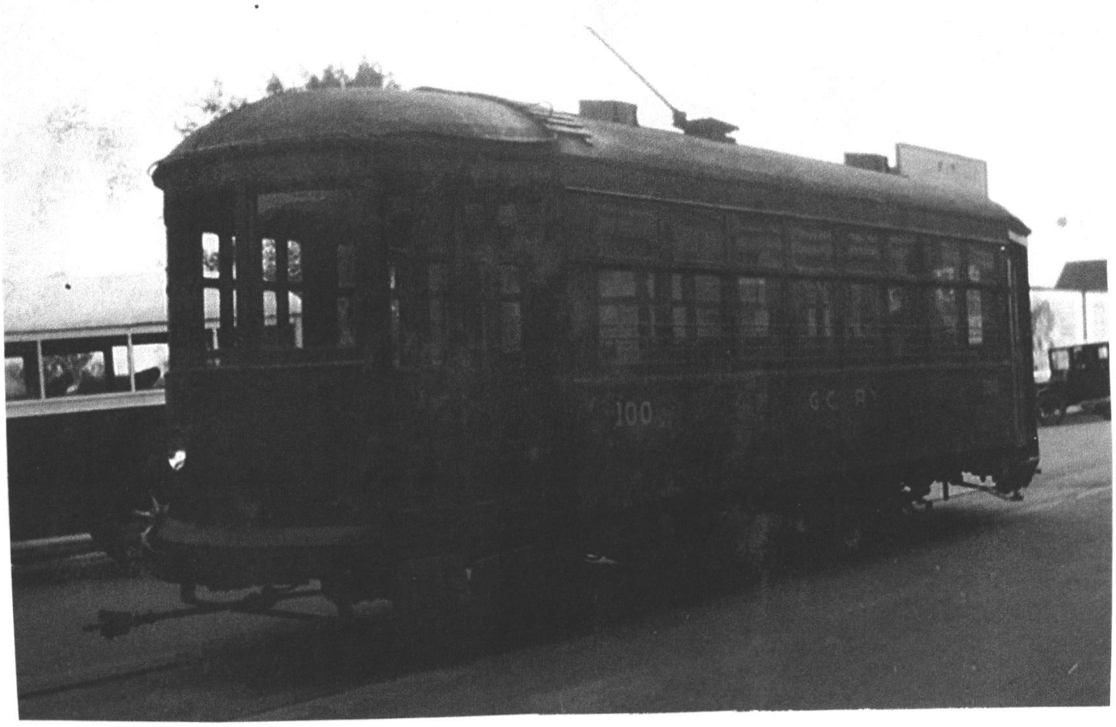
#10


WHERE EVERY STYLE IS CORRECT
D.C. ABELES & Co
CLOTHIERS. FURNISHERS. ETC.
HISTORICCARDS

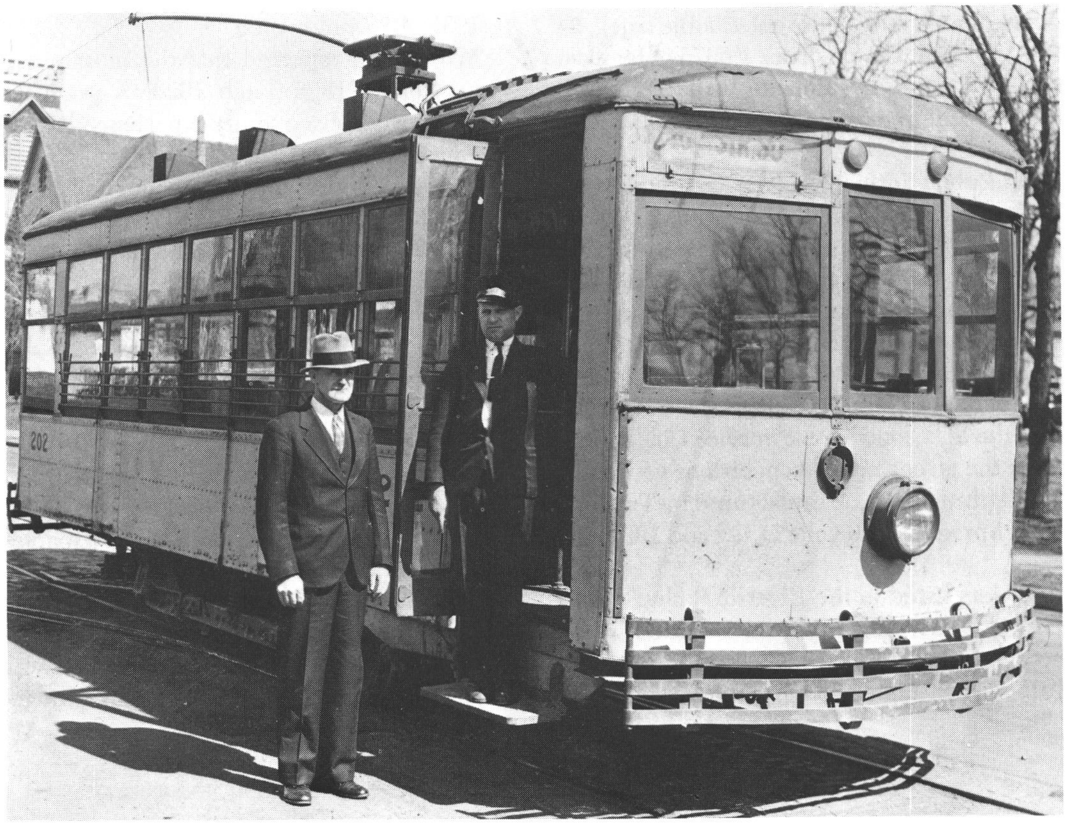
#10 McGuire 19-A Columbian truck
Photo of similar #11 page 423 ERM

#100 AND #101 6-10-1916 ST LOUIS 72 TRUCK

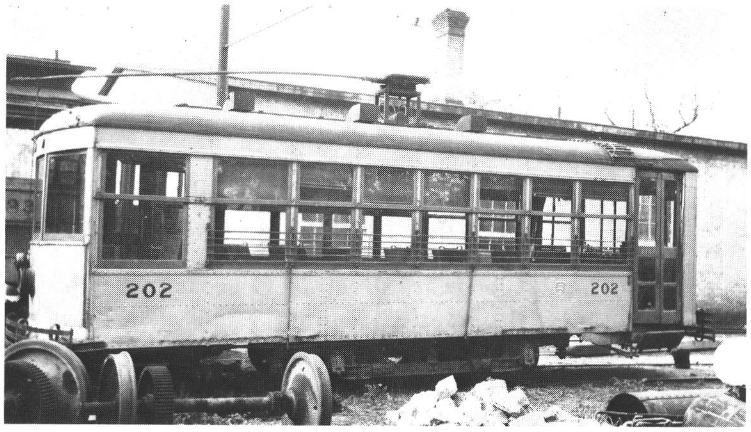

BALL PARK
100
ST. LOUIS CAR CO



Below: Birney car 202, painted yellow, during the last month of operation, April, 1936. Motorman Andrew Fowler is shown with Superintendent John Bohte. (Northern States Power Co.; Ken Fletcher collection)



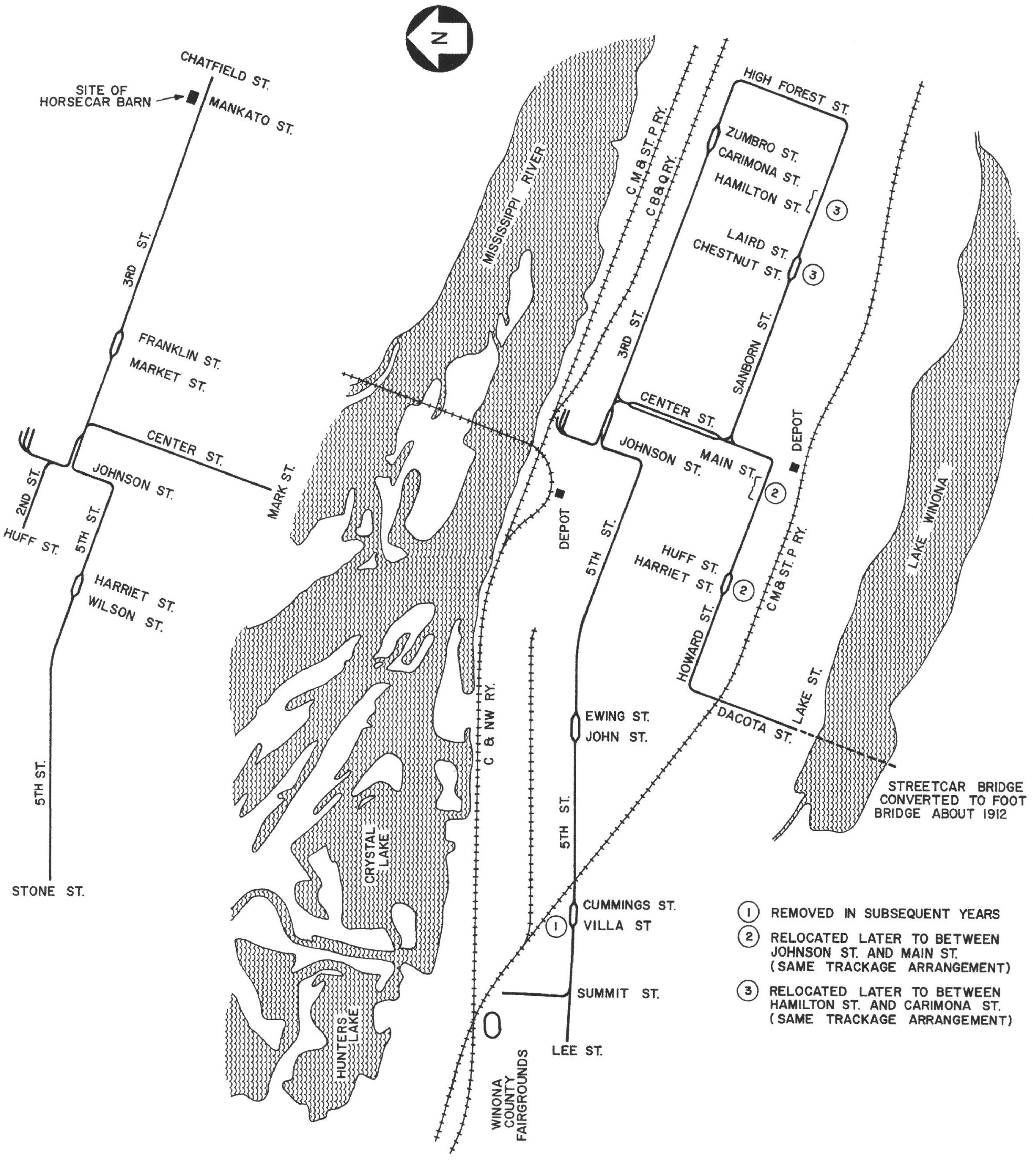
Below: Birney car 202 awaiting disposal outside the St. Cloud carhouse after the end of operations. (Robert M. Hanft; Joe Hutchinson collection)



WINONA RAILWAY & LIGHT COMPANY

WINONA CITY RY.
1894

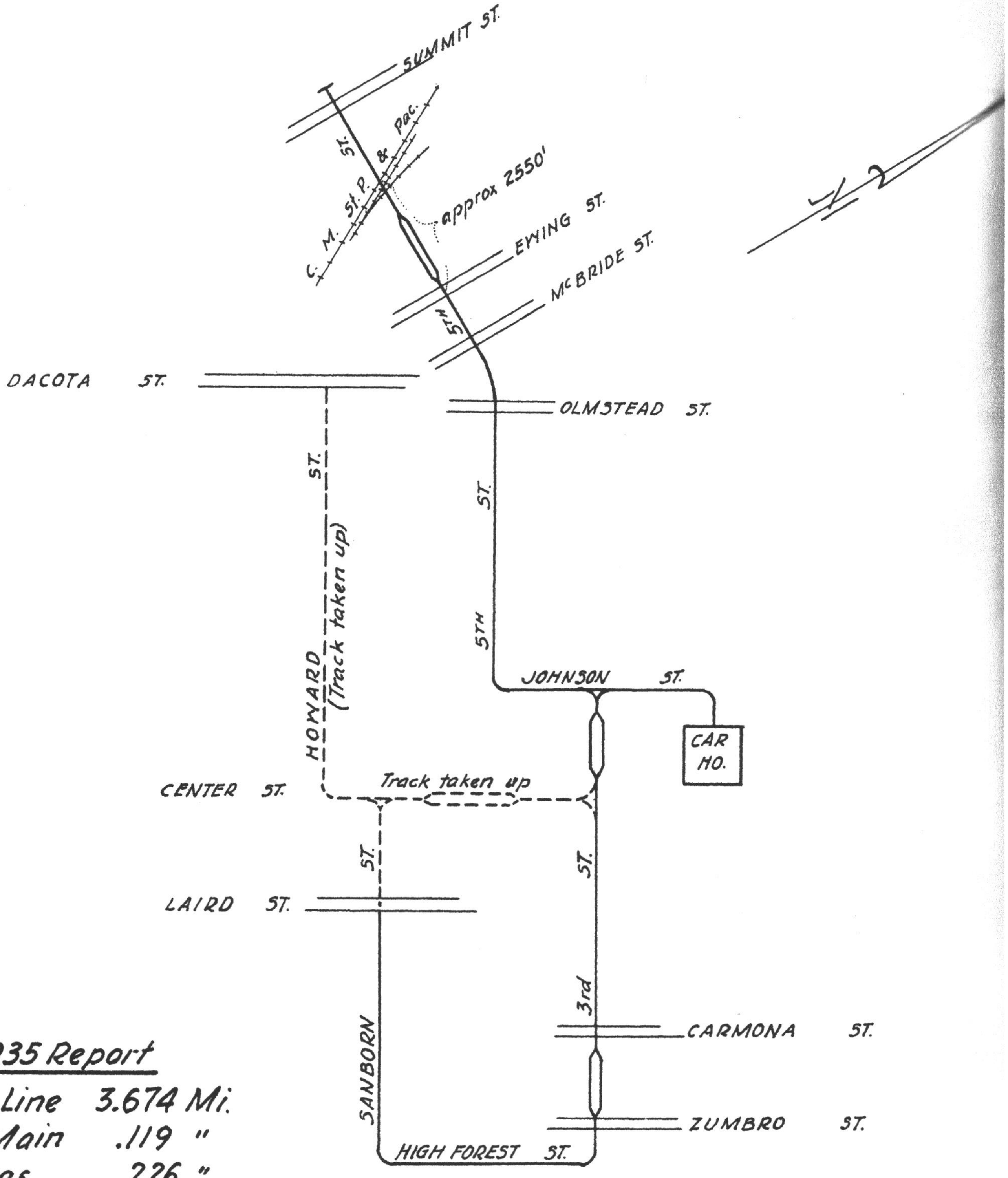
WISCONSIN RY.
LIGHT & POWER CO.
WINONA, MINN.
1-1916


N
CHATFIELD ST.
SITE OF HORSECAR BARN
MANKATO ST.
3RD ST.
FRANKLIN ST.
MARKET ST.
CENTER ST.
MARK ST.
2ND ST.
JOHNSON ST.
HUFF ST.
5TH ST.
HARRIET ST.
WILSON ST.
5TH ST.
STONE ST.
MISSISSIPPI RIVER
C M & ST. P RY.
C B & Q RY.
HIGH FOREST ST.
ZUMBRO ST.
CARIMONA ST.
HAMILTON ST.
3
LAIRD ST.
CHESTNUT ST.
3
3RD ST.
SANBORN ST.
CENTER ST.
JOHNSON ST.
MAIN ST.
2
DEPOT
DEPOT
5TH ST.
HUFF ST.
HARRIET ST.
2
HOWARD ST.
C M & ST. P RY.
LAKE WINONA
LAKE ST.
DACOTA ST.
C & NW RY.
EWING ST.
JOHN ST.
STREETCAR BRIDGE CONVERTED TO FOOT BRIDGE ABOUT 1912
5TH ST.
CRYSTAL LAKE
CUMMINGS ST.
1
VILLA ST
SUMMIT ST.
HUNTERS LAKE
LEE ST.
WINONA COUNTY FAIRGROUNDS

① REMOVED IN SUBSEQUENT YEARS

② RELOCATED LATER TO BETWEEN JOHNSON ST. AND MAIN ST. (SAME TRACKAGE ARRANGEMENT)

③ RELOCATED LATER TO BETWEEN HAMILTON ST. AND CARIMONA ST. (SAME TRACKAGE ARRANGEMENT)


SUMMIT ST.
C. M. St. P. & Pac.
ST.
approx 2550'
EWING ST.
McBRIDE ST.
5TH
DACOTA ST.
OLMSTEAD ST.
ST.
5TH
HOWARD ST.
(Track taken up)
JOHNSON ST.
CAR HO.
CENTER ST.
Track taken up
ST.
ST.
LAIRD ST.
3rd
CARMONA ST.
SANBORN
ZUMBRO ST.
HIGH FOREST ST.

1935 Report

Main Line	3.674 Mi.
2nd Main	.119 "
Sidings	.226 "
Shop & Car Ho.	.120 "
Total	4.139 Mi.

MINN. R.R. & WHSE. COMM.
Map showing streets in Winona where
Street Cars are operated by

MISSISSIPPI VALLEY PUBLIC SERVICE CO.

St. Paul - May 23, 1936 Eng. Dept.

WINONA RAILWAY & LIGHT CO.

Winona

Winona is a manufacturing, lumbering, and wheat shipping center located on the Mississippi River. The 1917 population was 18,583 persons.

The Horsecar Era

The Winona City Railway was incorporated in May, 1883, by T. T. Hayden, John A. Mathews, Royal D. Cone, C. H. Porter and Charles Horton. Offices were located at 119 Center St.

A horsecar line was constructed during 1883 from E. 3rd St. and Chatfield St. on 3rd St. west to Johnson St., south on Johnson St. to 5th St., and west on 5th St. to the Winona Wagon Works at the C.M.St.P.&P. Railroad crossing. This was known as the MAIN line. Eight new horsecars, numbered 1-8, were purchased from Brownell & Wight, St.Louis. Operation began December 25, 1883. A second line required by the franchise ran from the C.M.St.P.&P. R.R. depot at Center St. and Mark St. to the C.&N.W. Ry. depot at 2nd St. and Huff St. This was known as the DEPOT line and opened for operation December 29, 1883. Sidings were located on (1) W. 5th St. between Ewing and John Streets, (2) W. 5th St. between Harriet and Wilson Streets, (3) W. 3rd St. between Johnson and Center Streets, (4) E. 3rd St. at Kansas St., and (5) E. 3rd St. between Carimona and Zumbro Streets.

A horsecar barn was located at E. 3rd St. and Mankato Ave., one block west of the east end of the MAIN line. The stable measured 54' x 90' with single stalls for 36 horses. The carhouse measured 30' x 100', contained a transfer table, and had a capacity of 14 cars.

Horsecars number 7 and 8 were the first to arrive, November 24, 1883. Intended for the DEPOT line they were painted canary yellow with cardinal red panels under the windows, and lettered DEPOTS, POSTOFFICE AND HOTELS. Horsecars number 1 through 6 arrived next, November 29, 1883. They were painted canary yellow and white for the MAIN line and lettered EAST THIRD, POSTOFFICE AND WEST FIFTH STREET. All eight cars were double end, 12 ft. long, had ventilating roofs, and seated 16 persons. Seats were of perforated natural wood and the ceilings varnished natural wood.

As of 1890 the company owned 4.82 miles of track laid to 3'6" gauge, 10 horsecars and 36 horses. Track construction consisted of 27 lb. strap rail spiked to wood stringers on wood cross ties.

The Electric Car Era

General History

The Northwest Thomson-Houston Co. purchased a controlling interest in the company with electrification as the objective. This company had also acquired the St.Cloud City Street Car Co. for the same purpose. Electrification was completed in January, 1892. Materials and supplies left over were shipped to St.Cloud for use in the electrification there. The Northwest General Electric Co. succeeded the Northwest Thomson-Houston Co. later in 1892. A subsidiary, the Winona General Electric Co. furnished commercial and residential power and lighting in Winona. Financial results were unsatisfactory and receivership resulted February 19, 1895.

The Winona Railway & Light Co. was incorporated in March, 1896, and purchased the property and equipment of the Winona City Railway and Winona General Electric Co. at the foreclosure sale held April 13, 1896. Most of the capital stock was owned by easterners. By 1903 the United Electric Securities Co. of Boston owned the controlling interest. Operations continued to be financially unsatisfactory. During July, 1904, a financial re-organization was effected to write off amounts previously advanced by UESC to cover past operating deficits.

First mention of an interurban line between Winona and LaCrosse was noted in December, 1906. The LaCrosse & Winona Traction Co. was incorporated in Minnesota during February, 1907. On July 1, 1907, the LaCrosse Water Power Co. acquired the Winona Railway & Light Co. and began actively planning construction of the interurban line. However announcement came in February, 1910, that the proposed line probably would not be built, supposedly because of Federal legislation prohibiting electric railways from making through rates with steam railroads and water carriers. The real reason was the financial problems of the LaCrosse Water Power Co. Stockholders petitioned the court in July, 1911, to appoint a receiver. By August 24, 1911, this had been accomplished.

The Wisconsin Railway Light & Power Co. was incorporated in December, 1912, to acquire the LaCrosse Water Power co., LaCrosse City Railway, and Winona Railway & Light Co. These acquisitions were completed by January, 1913. Headquarters were located in Milwaukee in the same office building as the Wisconsin Public Service Co. Clement C. Smith was president of both corporations. In January, 1926, the corporate name was changed to Mississippi Valley Public Service Co.

MVPS became a large electric power utility and eventually got out of the street railway business. The last streetcars ran in Winona during 1938 and LaCrosse during 1945.

Track Construction

Electrification was begun during 1891. Regular electric operation commenced January 21, 1892, on the MAIN line from W. 5th St. and Jackson St. via W. 5th St., Johnson St., and 3rd St. to the carhouse at E. 3rd St. and Mankato Ave. Sidings were located on (1) W. 5th St. between Harriet St. and Wilson St., and (2) E. 3rd St. between Market St. and Franklin St. The DEPOT line opened January 29, 1892, from Center St. and Mark St. via Center St., 3rd St., Johnson St., and W. 2nd St. to 2nd St. and Huff St.

E. 3rd St. was paved during 1893 so the sidings on the MAIN line were relocated to allow more frequent headway. The new locations were on (1) W. 5th St. between Olmstead St. and Dacota St., (2) W. 3rd St. between Johnson St. and Center St., and (3) E. 3rd St. at Kansas St. The necessary trackwork was completed in September.

In August, 1897, the siding on W. 5th St. was relocated to between Harriet St. and Wilson St. However in November, 1898, it was again moved, to the previous location. In October, 1898, track was abandoned on E. 3rd St. from Carimona St. to Mankato Ave.

During 1900 the DEPOT line was abandoned except for the track on Center St. from 3rd St. to Howard St. The LAKE line was constructed on Howard St. and Dacota St. from Center St. to Lake Winona. One car began operation from 3rd and Center to Howard and Dacota November 17, 1900. Track was subsequently extended to Dacota St. and Mill St. A wood trestle was built across Lake Winona and the line extended over this trestle, ending at a platform on the south end of the lake adjacent to the Chicago Great Western Ry. track. The first cars over the trestle operated June 30, 1901. A siding was located on Dacota St. a short distance north of the lake as it was planned to extend the line to Bluffside Park and beyond. A siding was also located on Center St. between 3rd St. and 4th St. Originally the landing at the south end of the trestle could accommodate only one car. During August, 1901, platforms with railings were built on both sides of the trestle

1902 US CENSUS
ONE 1300 L.F. WOOD
TRESTLE

.11 MILES OF TRACK ON
OWNED RW.

long enough to allow three additional cars to unload and load passengers.

The 1902 U.S. Census reported first main track 4.50 miles, sidings 0.15 miles, and total track 4.65 miles.

As it was decided not to extend the LAKE line, the siding on Dacota St. was removed during 1903 and re-installed on W. 5th St. between Cummings St. and Vila St. Also during 1903 track was extended on W. 5th St. to Lee St.

During 1906 track was built on E. 3rd St. from Carimona St. to High Forest St., on High Forest St. to Sanborn St., and on Sanborn St. to Center St. Sidings were located on (1) E. 3rd St. between Carimona St. and Zumbro St., and (2) Sanborn St. between Center St. and Lafayette St. This track was partially opened in September and the remainder in October. During October, 1906, E. 3rd St. was rebuilt for double track operation (see map) between Center St. and Johnson St., and the eastbound wye curve installed at 3rd St. and Center St.

The siding on Center St. was extended two blocks to Broadway during 1907. The 1907 U.S. Census reported first main track 6.37 miles, sidings 0.15 miles, and total track 6.52 miles.

During 1908 the siding on Center St. was again extended, from Broadway to Sanborn St., thus making double track on Center St. from 3rd St. to Sanborn St. During 1909 a branch line to the ball park, formerly the county fairgrounds, was built. In November, 1910, it was proposed to relocate the siding on Sanborn St. to between Laird St. and Chestnut St.

The Lake Winona trestle had been condemned as unsafe for streetcars "some time ago" as of April, 1912. The rails were removed beginning in June, 1912. The trestle was later planked over for use as a footbridge after the city purchased it in May, 1914.

In October, 1913, the company was seeking permission from the city to relocate the siding on Howard St. to between Main St. and Johnson St.

Detailed Track Measurements as of January 1, 1916.

	First Track L.F.	Second Track L.F.	Sidings L.F.
MAIN line			
3rd and Center Sts. to 5th and Lee Sts.	10,633		
Fairgrounds branch	950		
3rd St., Center St. to Johnson St.		629	
5th St., Cummings St. to Vila St.			272
5th St., Ewing St. to John St.			373
3rd and Center Sts. to Sanborn and Center Sts.	12,377		
3rd St., Zumbro St. to Carimona St.			271
Sanborn St., Laird St. to Chestnut St.			282
Subtotal	23,960	629	1,198
LAKE line			
Sanborn and Center Sts. to Dacota and Lake Sts.	6,277		
Howard St., Huff St. to Harriet St.			286
Subtotal	6,277		286
Track common to both lines			
Center St., 3rd St. to Sanborn St.	1,931	1,618	
Carhouse track			
Johnson St., 3rd St. to the carhouse	560		
In the carhouse			528
Totals	32,728	2,247	2,012

Total in miles: first track 6.198 miles, second track 0.426 miles, sidings 0.381 miles, total track 7.005 miles.

According to U.S. Census figures the total track mileage decreased from 7.52 miles in 1917 to 6.50 miles in 1922. After a streetcar-train collision May 18, 1918, on the Dacota St. crossing of the LAKE line, and because of the poor condition of the track in the crossing, the company decided to remove the crossing and abandon the track from the crossing to the south end of the line at Lake St. This was effective June 1, 1918. A few years later a car spread the rails on the Dacota/Howard Sts. curve and derailed. The curve and remaining track on Dacota St. was then abandoned.

Transit directories depict the slow decline of the system.
1929: first track 5.920 miles, sidings 0.295 miles, total track 6.215 miles.
1933: total track 5.6 miles.
1934: total track 4.495 miles.
1935: first track 3.674 miles, second track 0.119 miles, sidings 0.226 miles, carhouse track 0.120 miles, total track 4.139 miles.

An experimental bus line was begun July 2, 1933, replacing streetcars on the LAKE line. On October 20, 1933, the LAKE line track was officially abandoned. On this same date track was also abandoned on Center St. from 3rd St. to Sanborn St., on Sanborn St. from Center St. to Laird St., and on W. 5th St. from Lee St. to Hilbert St., all on the MAIN line.

Friday, July 21, 1938, was the last day of streetcar operation on the MAIN line. The last run pulled in to the carhouse from the east end of the line in the early morning hours of July 22nd.

Power Generation and Distribution

Generating equipment for the electrification of the horsecar lines was installed in the Fiber Works plant at 3rd and Olmstead Streets.

The Northwest General Electric Co. purchased a small building from the Winona Electric Co. in 1892 located on the southeast corner of Front and Johnson Streets. This was made part of a larger building under construction at that location for use as a combined powerhouse and carhouse.

Street railway power generating equipment installed in this new building consisted of one Ide 200 h.p. steam Engine, one Ball 80 h.p. single-cylinder steam Engine, and two 86 h.p. Generators.

As of January 1, 1916, the generating equipment was two General Electric Co. units supplying 575 volts. D.C. with a total capacity of 400 KW.

Carhouses

The horsecar barn facilities were converted for electric operation in 1891 and were actively used until 1893. In that year a three-track 42' x 105' brick carhouse and repair shop was built adjacent to the powerhouse at 58 Johnson St. Some cars began operating from this new building in July, 1893. By September, 1893, all operations were being handled from the new carhouse.

The ex-horsecar barn facilities were sold to the Green Bay & Western Railroad, although the Winona City Ry. continued to store the old horsecars in the building. As of December, 1897, these old horsecars were still in storage there.

Due to expansion of the system, a 42' x 87' addition to the carhouse was built in 1906. The repair shop was relocated from the carhouse to this new addition.

Operations

Car number 12 was the first electric car to operate, January 21, 1892, opening the MAIN line. Three cars were used on the MAIN line providing a 12 to 14-minute service, one car on the DEPOT line, with one spare car. Relocation of the sidings on the MAIN line in 1893 allowed for operation of four cars on a nine-minute service.

One car opened the LAKE line November 17, 1900, providing twenty-minute service. Connections ere made at 3rd and Center Streets with MAIN line cars providing ten-minute service. This was changed December 21, 1900, when the EAST END line was begun as a stub line operated from 3rd and Center Streets to 3rd and Carimona Streets. The west end of the MAIN line was then through-routed with the LAKE line.

The LAKE line serviced Woodlawn Cemetary and Bluffside Park. The park had a dance pavilion and outdoor theater. During the summer of 1901 the company provided "motion picture entertainment" (Passion Play scenes) at the park to stimulate patronage. In June,1902, the city placed plank walkways from the end of the streetcar line to the park. During the summer of 1902 the company provided free concerts at the park. The landing at the south end of the lake accommodated four cars. On concert nights, when the concert was over, the four cars would load, then leave for town. The three other available cars were waiting at the nearest siding and proceeded to the landing after the four cars passed. Then regular service across the lake was resumed.

Service across Lake Winona was not provided during the winter months. Winter operation ended originally at Dacota and Howard Streets. In November, 1902, this was extended to Dacota and Mark Streets, the C.M.&St.P. Railroad crossing, but modified in December to provide rush hour service to Dacota and Lake Streets. In the early years occasional service across the lake was given in the fall and spring depending upon the weather. The prevailing service during March, April and November seemed to be Sundays only from 2 p.m. to 6 p.m.

On November 30, 1902, the MAIN line resumed its former through-routing using three cars, with the LAKE line operated as a short line from 3rd and Center Streets to Dacota and Mark Streets using one car. In January,1903, ten-minute service was instituted on the LAKE line during the hours of 6:00 a.m. to 8:30 a.m., 12:00 p.m. to 2:00 p.m., and 5:30 p.m. to 8:00 p.m. to Dacota and Mill Streets. When regular service across the lake was resumed May 2, 1903, the MAIN-LAKE through-routing again went into effect using four cars; the EAST END line operated from 3rd and Center Streets using one car.

The 1903 extension on W. 5th St. was a summer-only operation for several years. While under construction, service was provided to Vila St. On August 14, 1903, the full length to Lee St. was opened.

In December, 1905, it was decided to modify the routings established in May, 1903. During the rush hours only, 6:00 a.m. to 7:00 a.m. and 5:00 p.m. to 6:30 p.m., the MAIN line would operate on W. 5th and E. 3rd Streets, with the LAKE line operated as short line from 3rd and Center Streets using two cars. With construction of the EAST END loop trackage in 1906 the routings were again changed. The LAKE line reverted to a short line operated from 3rd and Center Streets. MAIN line cars operated on W. 5th and E. 3rd Streets, clockwise around the 3rd, High Forest, Sanborn, Center Streets loop. One EAST END car operated counter-clockwise around this loop.

When the second track on Center St. was extended during 1907 the objective was to reduce headway from 15 minutes to 10 minutes on all the lines involved. The MAIN and LAKE lines were again through-routed, the EAST END loop line operating with two cars, one in each direction, meeting MAIN-LAKE line cars at Center and Sanborn Streets. Completion of double track on Center St. in April, 1908, caused the MAIN and EAST END lines to be combined, all cars operating clockwise around the loop. The LAKE line again operated as a short line from 3rd and Center Streets.

By 1910 the company was having problems with the city council as to the condition of the cars and the quality and frequency of service. Apparently the service had been reduced by reverting to the 1906 routings. In November, 1910, these changes in operation were proposed. LAKE line: from 3rd and Center Streets to Dacota and Lake Streets. Two cars to provide base service, meeting at the siding on Howard St. MAIN line: from W. 5th and Lee Streets, via W. 5th, Johnson, 3rd, High Forest, Sanborn and Center Streets to 3rd and Center Streets. Reverse direction and return via the same route. Five cars to provide base service, meeting at the various sidings. One LAKE line car and two MAIN line cars would connect at 3rd and Center Streets every 12 minutes. Base service on both lines to be operated on a 12-minute headway. Extra cars would operate in rush hours on the double-header method (an extra car immediately following a regular car). These changes were promptly instituted and this system remained in effect for many years.

Smaller and older wooden cars, and later Birney cars, were used on the LAKE line. The larger and newer steel cars were generally used on the MAIN line, and only occasionally on the LAKE line.

When the LAKE line and a substantial portion of the MAIN line were abandoned in October, 1933, 12-minute service was continued by streetcars on the remainder of the line until abandonment in 1938.

Equipment

Five single-truck, closed passenger motor cars, numbers 10-14, were purchased from Northern Car Co., Robbinsdale, Minnesota. Measurements were 16' body, 24'10" long overall, and 7'2" wide.

One single-truck, open snow sweeper was received February 2, 1892. In December, 1895, it was equipped with wing plows and flangers.

Two single-truck, open passenger motor cars had been ordered from Northern Car Co. but when nearly completed were destroyed in the May, 1892, fire that put the car company out of business. The cars were replaced by two 10-bench open motor cars built in St.Louis. Numbers 15 and 16 were received in October, 1892. They were motorized only during the summer months; in the winter the motors were used on the snow sweeper.

The newspaper reported that trailers were being operated during June,1893. These were probably some of the former horsecars. These old horsecars were stored in the former horsecar barn, and were still there in December, 1897, when one was removed for use as a waiting room at the west end of the MAIN line.

Improvements to service implemented in 1893 required one additional car for the MAIN line. One of the 10-14 series cars was tranferred from the DEPOT line, being replaced by a car (number 7) transferred from the St.Cloud system. Newspaper accounts report that a single-truck, closed passenger motor car, painted yellow, was purchased for use on the DEPOT line and received September 26, 1893. According to the newspaper October 14, 1893, the company had seven closed cars and two open carss. Apparently the number 17 was reserved for possible purchase of the St. Cloud car because number 18 was assigned to the newly-purchased car. St. Cloud number 7 was shipped back to them December 28, 1895.

Vestibules were first installed during December, 1893. These comprised cherry-wood fronts with plate glass windows; the sides were removable canvas curtains. During 1896 the canvas was replaced with wood sides, doors on the "gate side" and solid, with windows, on the "pole side".

One single-truck, closed passenger motor car, number 17, was purchased second-hand from somewhere in Illinois. The car arrived in August, 1900, but did not enter service until December.

The 1902 U.S. Census reported the company as owning seven closed passenger cars (10-14, 17-18), two open passenger cars (15-16), one work car and one snow sweeper. Of the 11 total cars, nine had electric motor equipment. Eight had fenders, six had stoves, and ten had electric lights. The work car may have been the wire car, a four-wheel push car with a line tower built on the deck. In August, 1902, it was reported that six closed cars were available, five for regular service and one for a spare.

In the late fall, 1902, one single-truck, closed passenger car, number 19?, was acquired from Buffalo, New York. Considered of too light construction to be equipped with motors, it was to be overhauled during the winter for service as a trailer in 1903.

A snow sweeper was purchased from McGuire-Cummings Mfg. Co. in 1902.

The company first undertook overhauling cars in its own shops during August, 1902. At this time the paint scheme was changed from dark red to yellow. Number 10 was the first car completed, in August. Number 13 was next completed, in September. All but three cars were finished by February, 1903. One of these was completed by July, 1903. Only number 14 never received the overhauling and by November, 1904, was badly in need of repainting.

During July, 1903, the first new K-2 controllers were installed on number 12. All other cars were to be similarly equipped as soon as possible. McGuire Columbian single trucks were installed on numbers 10 and 12 during November, 1904.

In December, 1904, another car overhauling program was announced which included the installation of permanent vestibules (the previous ones were removable) and a new paint scheme. Canary yellow with orange belt panels was selected. It was also planned to overhaul number 14; a rehabilitated body would be placed on the old truck. However this was not immediately done; instead the motors were removed in June, 1905, and the car used as a trailer that summer. Number 17 was the first actually completed under the new program. Finished in January, 1905, it also received a McGuire Columbian truck. The overhaul program was completed on: number 18 in February, 1905; number 10 in February-March, 1905; and numbers 11 and 12 in April, 1905.

Then the company announced that one "practically new" car, number 20, was to be added to the roster. This was a single-truck, closed passenger motor car, originally built by Pullman's Palace Car Co. for Milwaukee, Wisconsin. The car was to be repainted to the new Winona color scheme in Milwaukee; it had permanent vestibules and one McGuire Columbian truck. The car arrived in Winona during January, 1905. The newspaper reported at that time that numbers 18 and 20, as well as the two open cars, had 18 ft. bodies, while the other cars all had 16 ft. bodies.

From September, 1905, through February,1906, number 14 was completely overhauled with new style vestibules, new windows, rehabilitated body, new truck and motors. Upon completion it was re-numbered 19, implying that first number 19 had been retired.

Two new closed passenger motor cars, numbers 21 and 22, were received from the McGuire-Cummings Mfg. Co. in December, 1906, and placed in service February-March, 1907. This gave the company ten closed cars (10-13,17-22) and two open cars (15-16).

Number 17 was badly damaged in a derailment in April, 1907, and was again overhauled and partially rebuilt, including new vestibules. This work was completed in November, 1907.

During August, 1907, a flat trailer was built by placing 2" planks on a frame mounted on a single truck. This car was used for hauling supplies, cinders, waste, etc.

Two new closed passenger motor cars, identical to numbers 21-22, were ordered from McGuire-Cummings Mfg. Co. in 1907. Numbered 23 and 24, they were received in December, 1907, and placed in service in January, 1908.

With the pending arrival of new cars 23-24, newspaper accounts of the company's equipment as of October, 1907, can be summarized. Seven cars to be used in regular service: four new cars 21-24; three cars almost as good as new: 17, 19 and 20. Four cars in reserve, the oldest cars: 11-13 and 18. Two summer cars, 15-16. Apparently number 10 had been retired during 1907.

The 1907 U.S. Census reported nine closed passenger cars, two open cars and one work car (snow sweeper). Of the 12 total cars, 11 had electric motor equipment (two motors per car). The nine closed passenger cars would be numbers 11-13 and 17-22, assuming numbers 23-24 were not counted as they had not yet entered service.

One open car was used to haul rails for track construction on Center St. during April, 1908. The newspaper later reported that number 16 (sic) entered the shops during July, 1908 to be rebuilt with permanent vestibules. This car was completed in August. Perhaps this was number 13, re-numbered 16 to replace the open car.

Number 23 is mentioned as pulling a trailer in an article in the October 25, 1908, issue of the newspaper. The article stated the weather was quite bad that day but no hint is given as to whether the trailer was open or closed. Speculation is open car number 15.

Number 20 was involved in a collision in late 1908 and was rebuilt during the winter of 1908-1909, "re-styled" in that the permanent vestibules were made to conform to those on the other cars. Shortly after its release from the shops in February, 1909, the car was placed in shuttle service on W. 5th St. west of Jackson St. due to a railroad crossing replacement. The car was stored outside on the street overnight. Vandals set it on fire one night, completely destroying the car. Another car then in the shops, probably number 12, being repaired and rebuilt with the latest vestibules, was re-numbered 20.

As of April, 1909, eight closed passenger cars were reported owned. Presumably number 18 had been retired. Number 11 was not in the best condition; we don't know if it was included. If it was included then 2nd 19 would have been retired. Thus the eight cars would be: 11 or 2nd 19, 2nd 16, 17, 2nd 20 and 21-24.

Four open trailers were purchased second-hand through the Dorner Railway Equipment Co., Chicago, for ball park service over the newly constructed branch line. These cars were former Chicago cable trailers. Listings in the Electric Railway Journal are not clear as to which cars.

2096,2102,2108,2112 (2096-2116 series built by John Stephenson Co.) were shipped to an un-named destination in March, 1909.

2686,2692,2698,2700,2704 (2660-2719 series built by American Car Co.) were shipped in April, 1909, supposedly to Winona.

2668,2670,2681,2709 (2660-2719 series built by American Car Co.) were shipped in May, 1909, to Winona.

Since the purchase agreement was reported in the April 26, 1909, issue of the Winona newspaper, the four cars shipped in May, 1909, are most likely the four received in Winona.

On March 15, 1910, the P.A.Y.E. fare collection system was put into effect. Front doors were used for both entrance and exit, the rear doors being unused.

Number 11, being in poor condition, was retired in 1910. Short of cars, the company purchased two single-truck, closed passenger motor cars from Chicago in late 1910. Numbered 25 and 26, the cars were repainted in Winona colors before being shipped from Chicago. Number 25 was received in December, 1910, entered service in January, 1911, and was quickly discovered to have flat wheels. Number 26 was received in January, 1911, entered service in February, 1911, and one day after going into operation burned out both motors.

After purchase of the Chicago cars, nine closed passenger cars were owned; eight needed for service with one for a spare. These nine cars would be 16-17, 20-26. Thus 2nd 19, if not previously retired, had definitely been disposed of by this time.

Number 17 was destroyed in a train collision on the Dacota St. crossing on the LAKE line in May, 1911.

The company was having continual problems with the city council during 1911 regarding the condition of the cars. The former Chicago cars were not in good mechanical and electrical condition when received. The poor financial condition of the company did not help matters. According to newspaper articles the company informed the city council in 1911 that it had ordered four new cars. However the Electric Railway Journal's listing of 1911 car orders, published in early 1912, shows that only two cars were ordered, from the John Stephenson Co. The newspaper reported that one car was received June 12, 1911, and another car, number 29, on July 1, 1911. Later articles mention car number 29 so that number is assumed to be correct. If the existing numbering system was followed four cars would have been numbered 27-30. Perhaps four cars were originally ordered but the deteriorating financial condition allowed them to take delivery of only two cars after the order was completed.

The ex-Chicago open passenger trailers were evidently re-numbered, probably 31-34, as a newspaper article dated July 4, 1913, mentions a car number 33 in operation that day.

Numbers 21 and 23 were involved in a head-on collision October 9, 1911. The receiver decided to overhaul and repaint all the cars to improve relations with the city council. As the cars were completed they were also re-numbered.

New No.	Old No.	Date in Service	Comments
1	21	1-03-1912	Repaired after collision.
2	23	2-06-1912	Repaired after collision.
3	?	2-23-1912	
4	?	3-08-1912	
5	16	4-??-1912	Numbers 3 and 16 were in a collision March 1, 1912; both were repaired.
6-7-8	?-?-?	May/June 1912	

As nine cars were reported owned at this time (16, 21-26, ? and 29) apparently 2nd 20 had been retired (1911?) and one car had not yet been overhauled and re-numbered. The latter may have been number 26 which was supposedly disposed of after the summer of 1914, still with this same number.

Four modern cars of steel construction were ordered from St.Louis Car Co., order number 1012 dated October, 1913. Numbered 9-12, they were received March 30, 1914. These cars were 34'4½" long overall with 6'3" platforms, 8'1" wide, weighed 12 tons, and seated 32 persons. The single St.Louis 46 truck of 8'0" wheelbase was equipped with two 25 h.p. motors. The cars were painted yellow. All entered regular service May 3, 1914. All were equipped with air brakes in 1916.

One man operation began May 2, 1914. The older cars had been equippped with folding doors operated by the motorman, using automatic door openers installed on the vestibuled platforms. All entrance and exit was through the front vestibule. During July, 1914, push buttons replaced overhead pull cords on the older cars which were used by passengers to signal the motorman when they wished to alight. In December, 1914, the first use of storm windows on the cars took place, and scrapers were replaced by sanding devices.

Four additional passenger motor cars of steel construction were ordered from St.Louis Car Co., order number 1092 dated February, 1916. These cars differed slightly from the previous order in that they were about 36'6" long and 8'8" wide. Other data was the same except that these cars were equipped with air brakes when built. Numbered 13-16, all entered service during September, 1916.

On May 18, 1918, the Milwaukee Road "Fast Mail" train struck broadside and completely demolished number 3 on the Dacota St. crossing of the LAKE line. Two persons were killed and seven injured.

In June, 1918, the company announced a new color scheme was to be adopted, similar to that used in LaCrosse. Side and end panels would be dark green, window sash and letterboard yellow, and roof flame red. This scheme was used only on the modern cars 9-16. The old cars, 1-8, retained the yellow scheme until they were retired.

Information is lacking on the disposition of numbers 1-8. The company kept a logbook of accidents and from this it was possible to obtain the last date each car was involved in an accident. This gives a rough idea when each car was nearing the end of its life.

1	April, 1919.	2	June, 1915.	3	May, 1918.	4	March, 1918.
5	October, 1914.	6	April, 1913.	7	November, 1920.	8	November, 1920.

During 1920 LaCrosse City Ry. single-truck, closed passenger motor cars 35-37 were transferred to Winona for use on the LAKE line. Details on these cars are given in the section on LaCrosse. Number 36 was retired about 1925, the body being sold and converted into a garage. Number 35 was scrapped about 1926. Number 37 was wrecked by a falling tree on the LAKE line during a sleet storm in 1926.

During 1923 LaCrosse City Ry. cars 49-50 were transferred to Winona. These cars had been built by St.Louis Car Co. in 1912 and were nearly identical to Winona cars 9-12. The only differences were (1) the entrance-exit doors were sliding rather than folding, and (2) a hooded destination sign was mounted on the front dash. During 1925 both cars were remodeled and re-numbered 7-8. The sliding doors were replaced with folding doors and a window-mounted destination sign replaced the dash sign.

A new color scheme was devised in 1926. The carbody was french grey, window frames delphinium blue, and roof black. Later a white "flare" was painted on the dashes.

In 1928 two single-truck, double-end, Birney cars were purchased from the Menominee & Marinette Light & Traction Co., Wisconsin. Originally their numbers 1-2, they were built by St. Louis Car Co. in 1924, measured 28'0½" long, 7'8" wide, weighed 16,600 pounds, and were fitted with one St.Louis truck equipped with Westinghouse Electric Co. traction motors. They were repainted in Winona colors, re-numbered 5-6, and used primarily on the LAKE line.

7-3-1924
Order 1343
St Louis #7
truck

About 1930 the entire fleet of cars, with the sole exception of number 12, were repainted to a new color scheme. Orange body, cream window sash, red trim, red-orange or black roof, and a white "flare" on the dashes. About 1934 the white "flare" was eliminated.

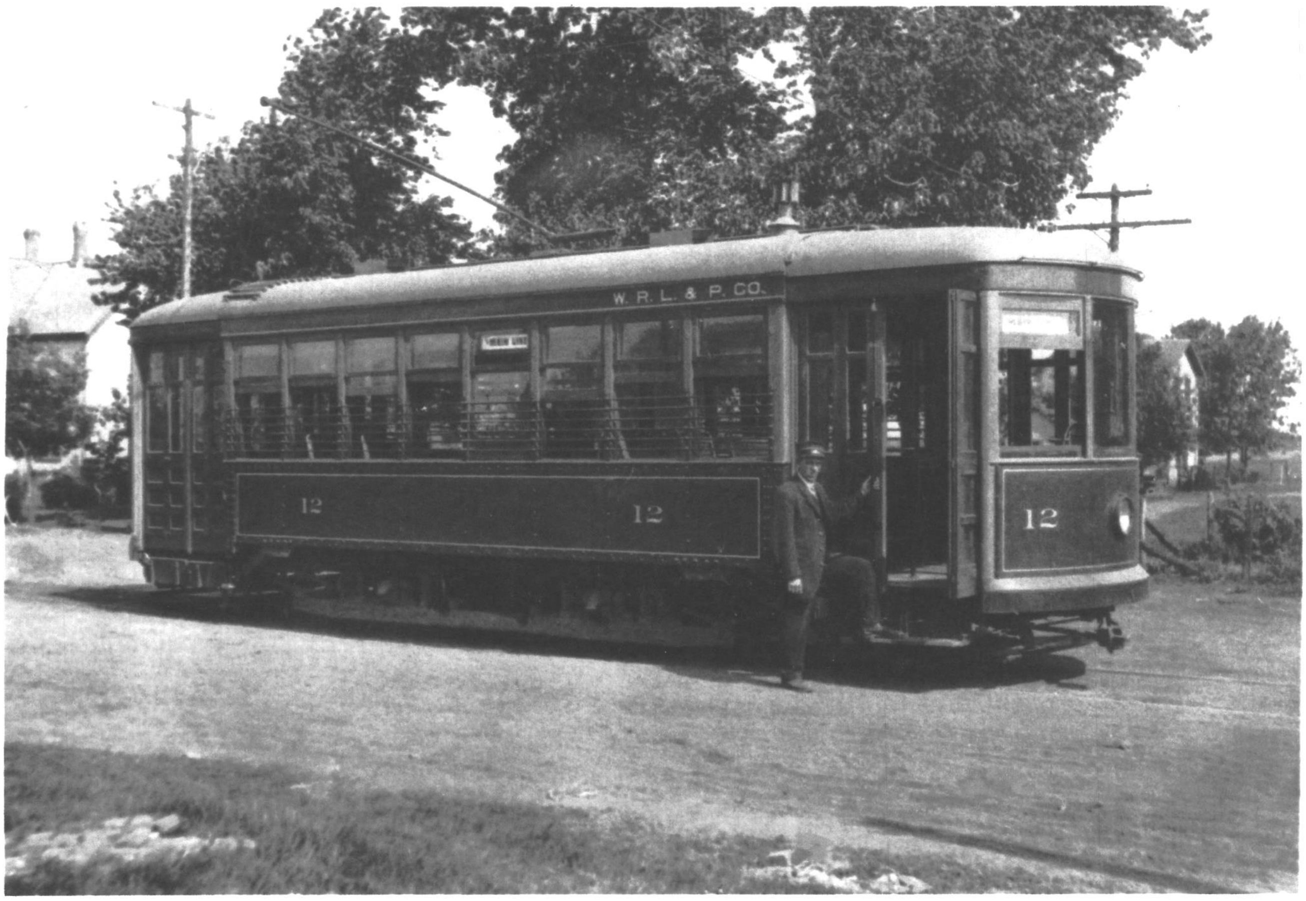
Number 12 was in poor condition in 1930 perhaps the result of an accident in April, 1930. The body was eventually sold and became a 4-H club house at Farmers Community Park located between Stockton and Lewiston, Minnesota.

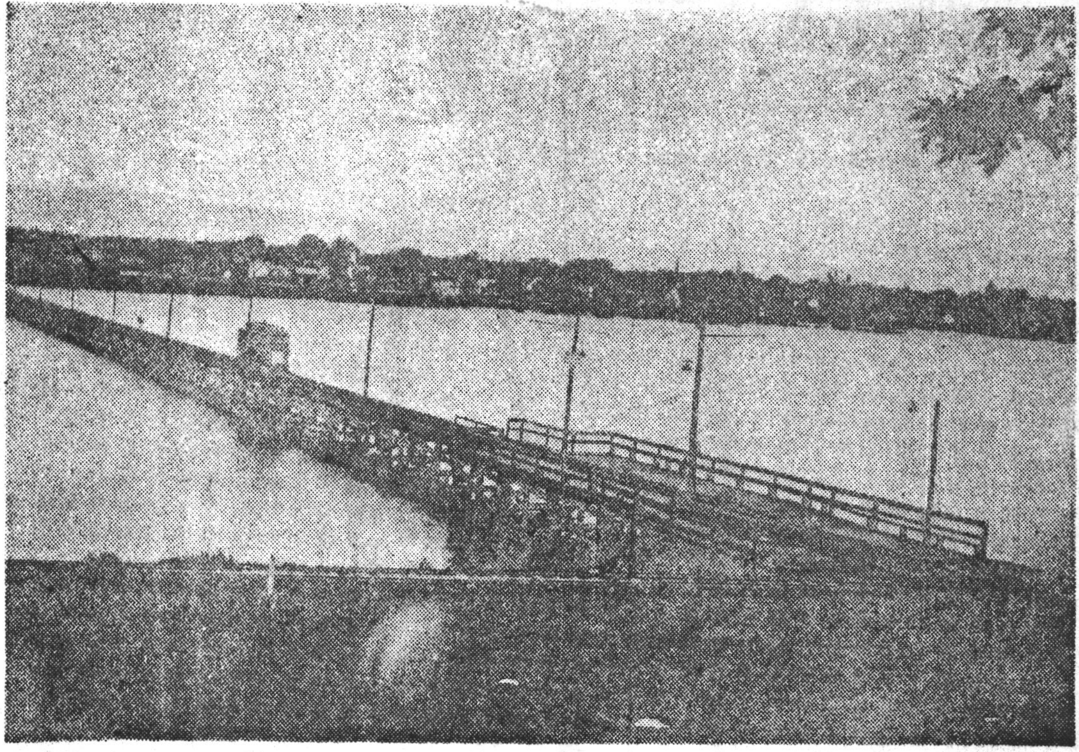
Transit directories summarize the equipment operated during the last years of operation.
1923-1924: 15 passenger motor cars (all one-man operated) and 1 snow sweeper.
1925-1932: 11 passenger motor cars and 1 snow sweeper.

1933-1934: 6 passenger motor cars and 1 snow sweeper.
1935-1938: 4 passenger motor cars and 1 snow sweeper.

The accident log book shows that the last accidents for numbers 7-8 were June, 1929, and June, 1930 respectively. Birney cars 5-6 were last used in 1933 and scrapped that same year. Numbers 7-8 and 16 were scrapped during 1934. The six cars left were 9-11, 13-15. Numbers 13 and 15 were scrapped during 1935. Numbers 9-11 and 14 were the four cars left during 1935-1938.

The last run was made by number 10 with Joseph McCormack as motorman July 22, 1938. The disposition of numbers 9-11 and 14 was not recorded. The Minnesota Transportation Museum Inc. acquired the body of number 10, in restorable condition, in 1999. The snow sweeper was transferred to the LaCrosse system.



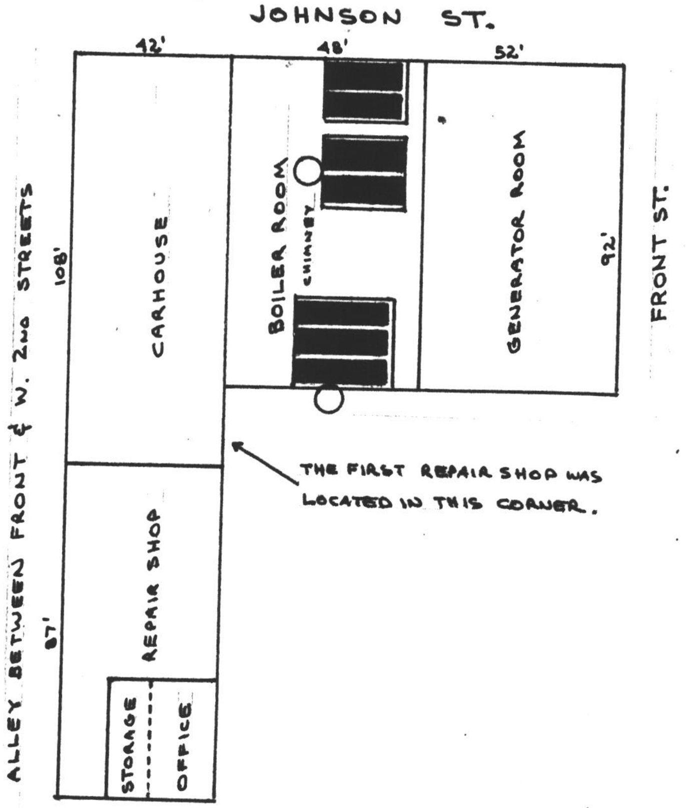


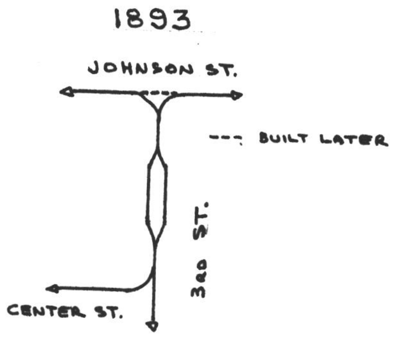
BRIDGE ACROSS LAKE . . . Here's an unusual view of the bridge across Lake Winona from the vicinity of Dacota Street to Woodlawn Cemetery. This picture, is from the C. P. Robb collection.

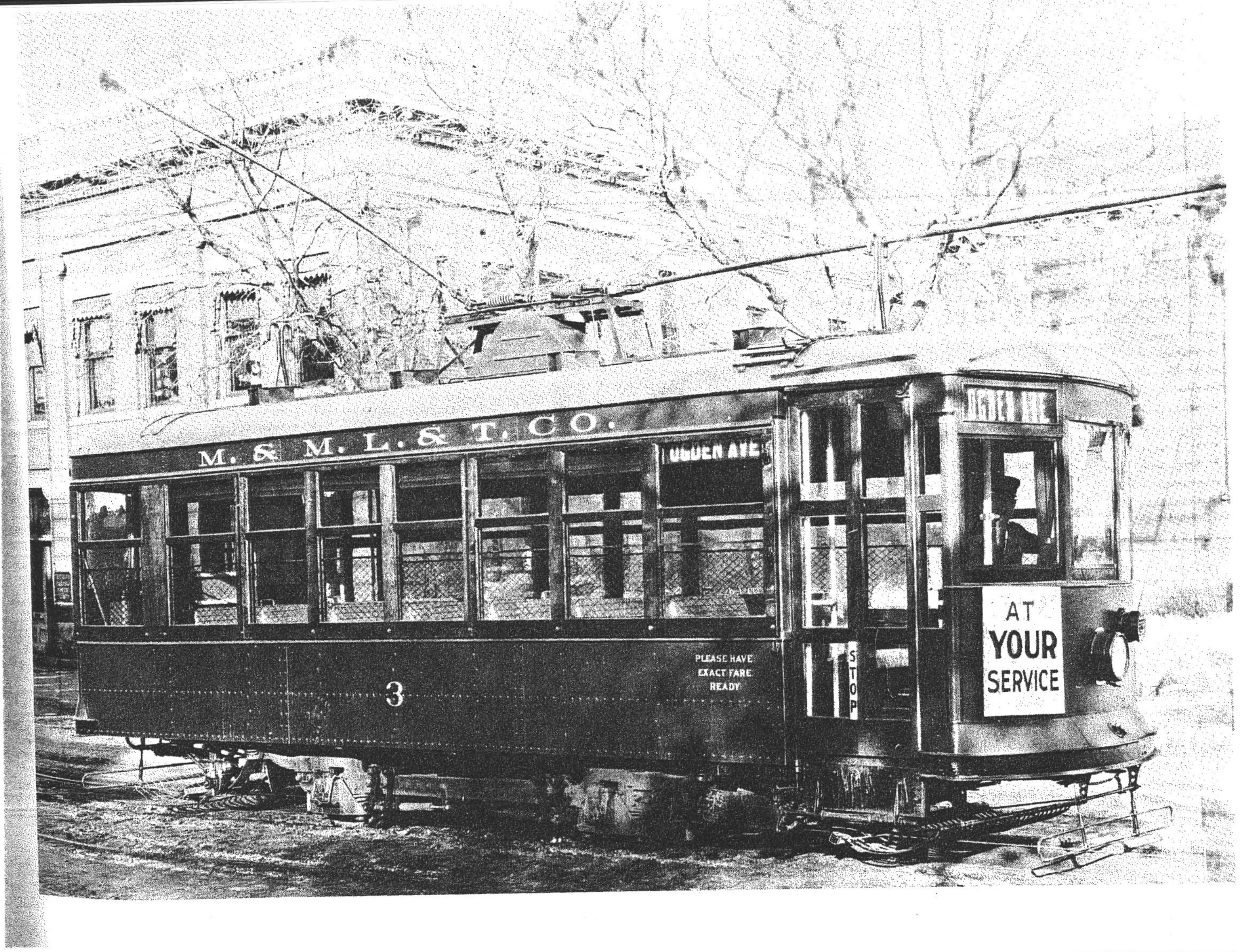
C. 1909

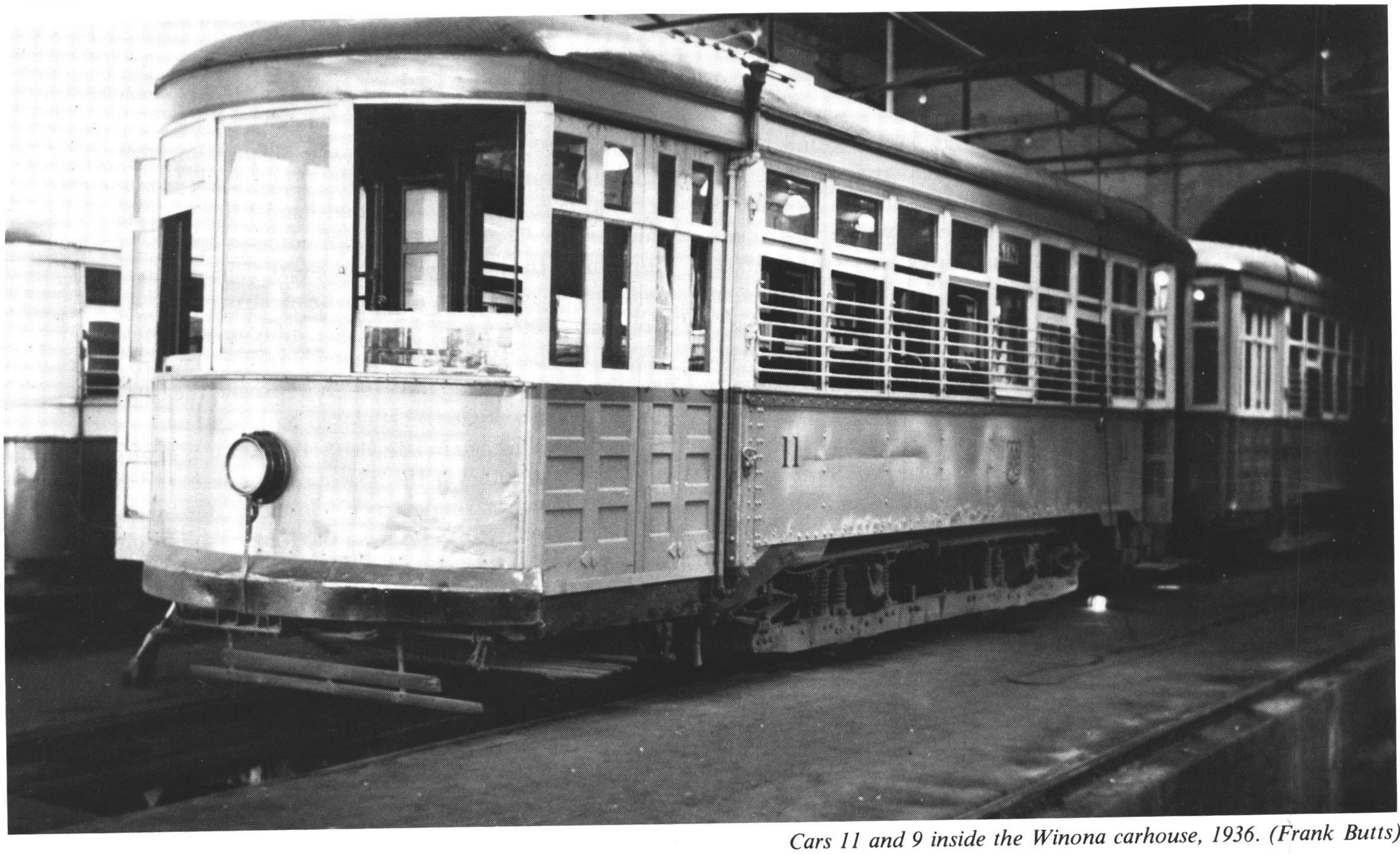
WINONA RY. & LIGHT CO.

CARHOUSE & POWERHOUSE


JOHNSON ST.
42'
48'
52'
108'
CARHOUSE
BOILER ROOM
CHIMNEY
GENERATOR ROOM
92'
FRONT ST.
ALLEY BETWEEN FRONT & W. 2ND STREETS
87'
REPAIR SHOP
STORAGE
OFFICE
THE FIRST REPAIR SHOP WAS LOCATED IN THIS CORNER.

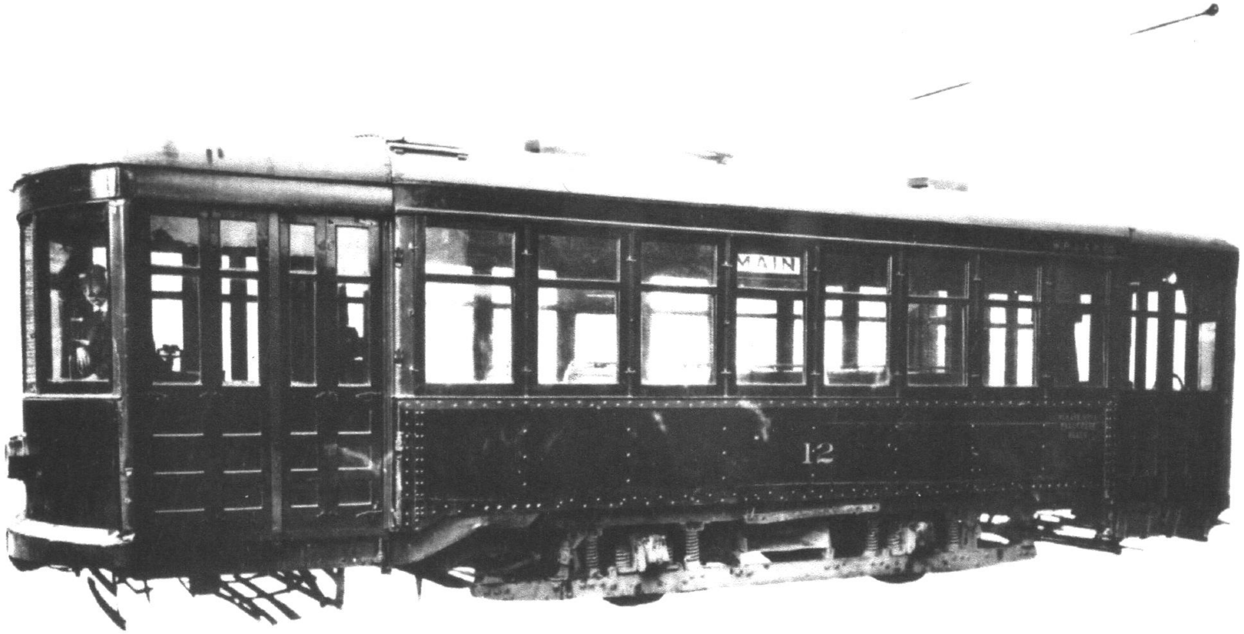

1893
JOHNSON ST.
--- BUILT LATER
3RD ST.
CENTER ST.


M. & M. L. & T. CO.
OGDEN AVE
OGDEN AVE
PLEASE HAVE EXACT FARE READY
3
STOP
AT YOUR SERVICE



Cars 11 and 9 inside the Winona carhouse, 1936. (Frank Butts)

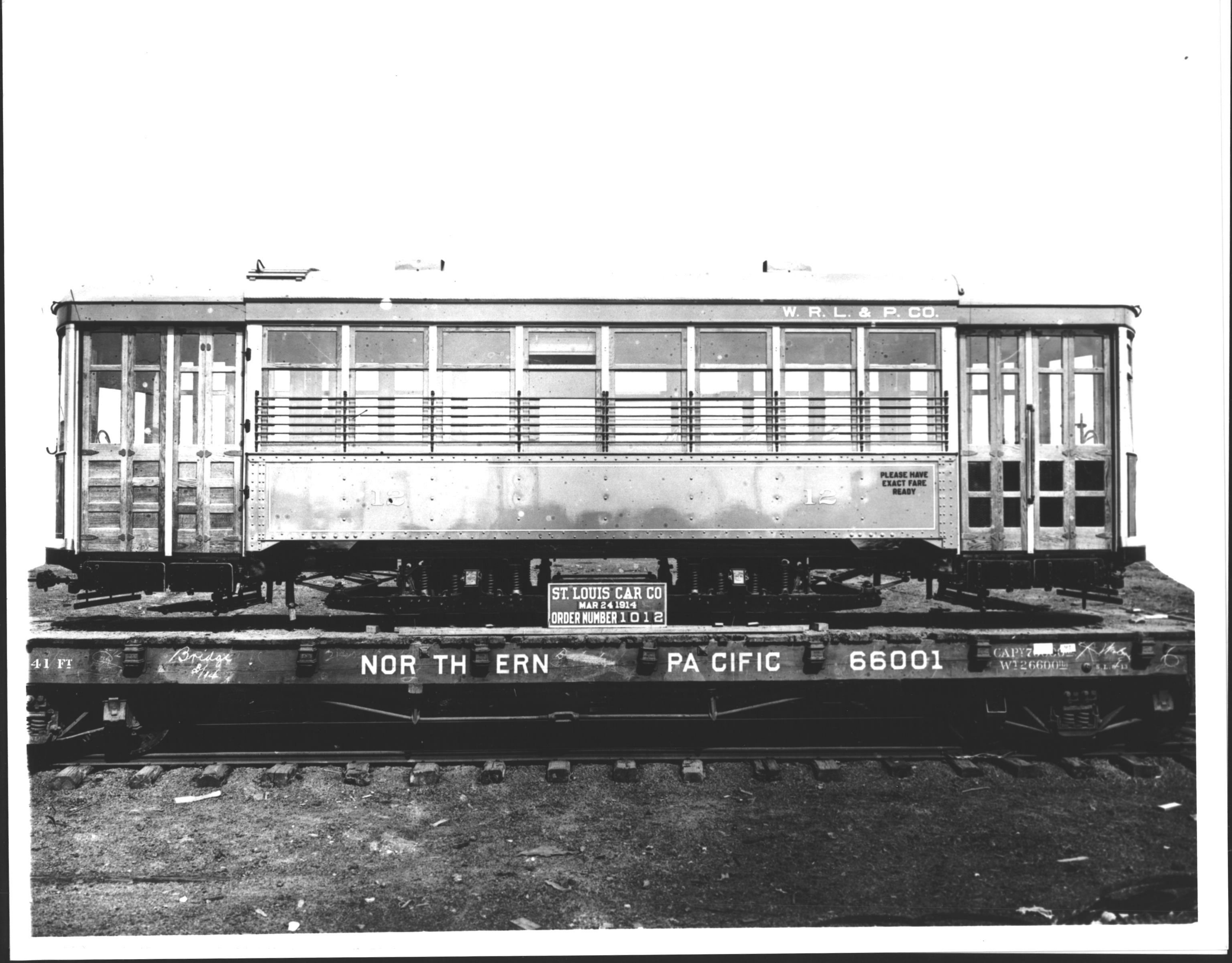
Winona car 12 and LaCrosse car 50 are identical except for the sliding door on No. 50. The news release on the order for the four cars 9-12 said the cars would be equipped with sliding doors but they arrived with double folding doors instead. The interiors were the same except for seat arrangement. The Winona cars had 12 walk-over seats and 4 single longitudinal seats while the LaCrosse cars 49-50 had the same seat arrangement as St. Cloud 101.

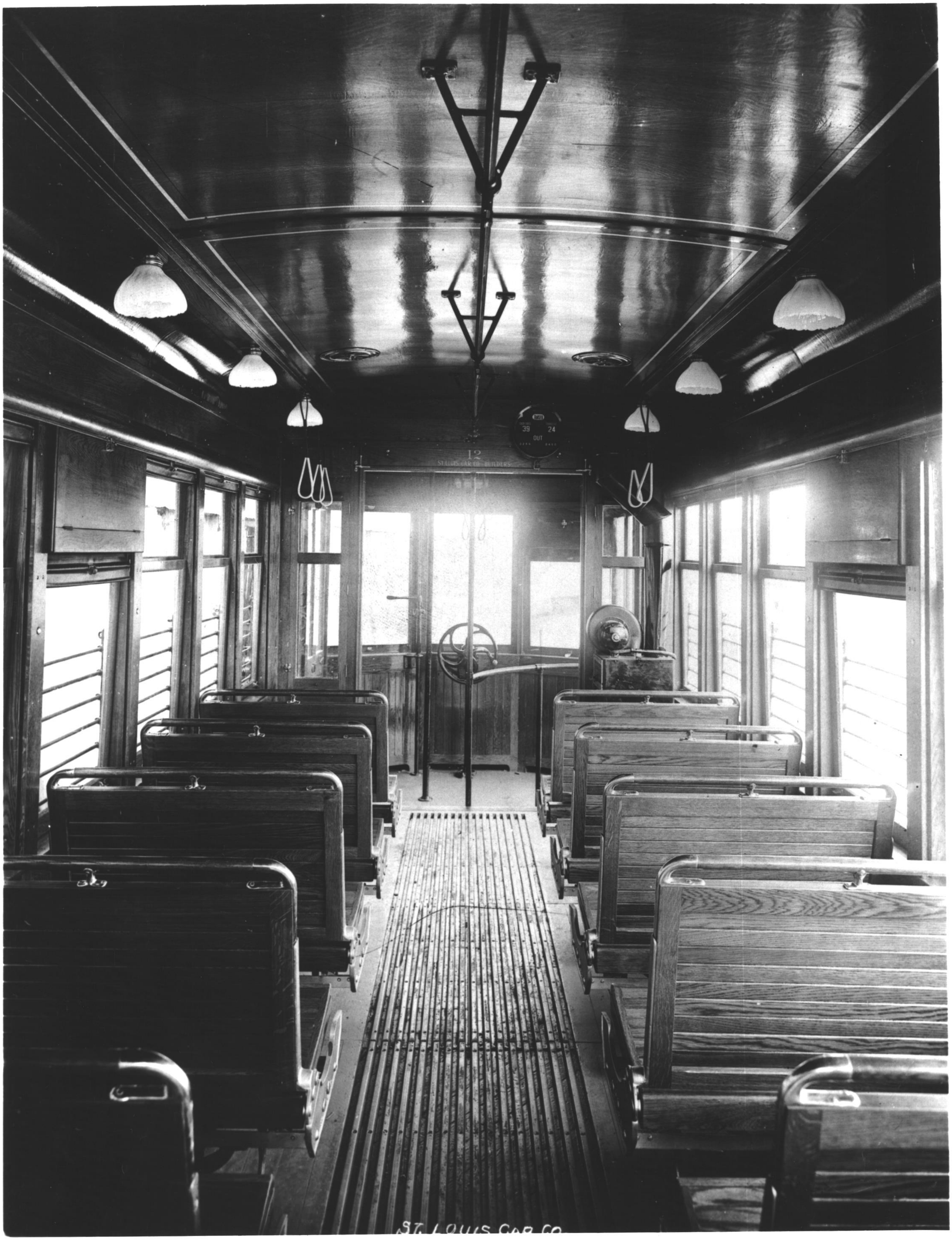


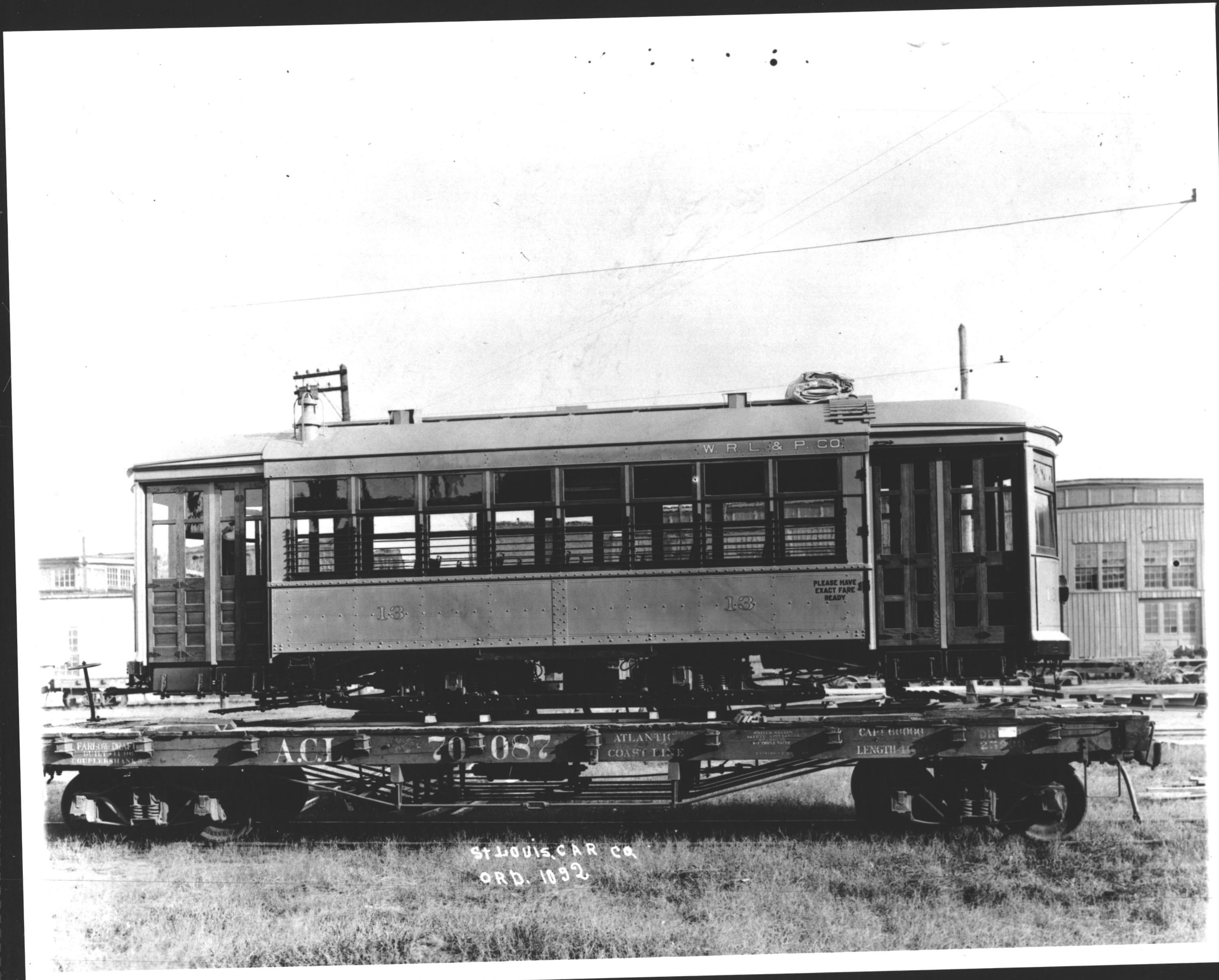
#9-12 COLOR SCHEME AS BUILT: YELLOW BODY WITH SILVER STRIPING, RED ROOF, BLACK TRUCKS AND UNDER BODY EQUIPMENT

The two St. Cloud cars 100-101 are quite similar to the four Winona cars 13-16 also built in 1916. The bodies of 13-16 are the same as 100-101, each have double folding doors but the St. Cloud cars have shorter platforms; the roof contour is the same except the roof on the Winona cars rise a bit higher from the letter-board.

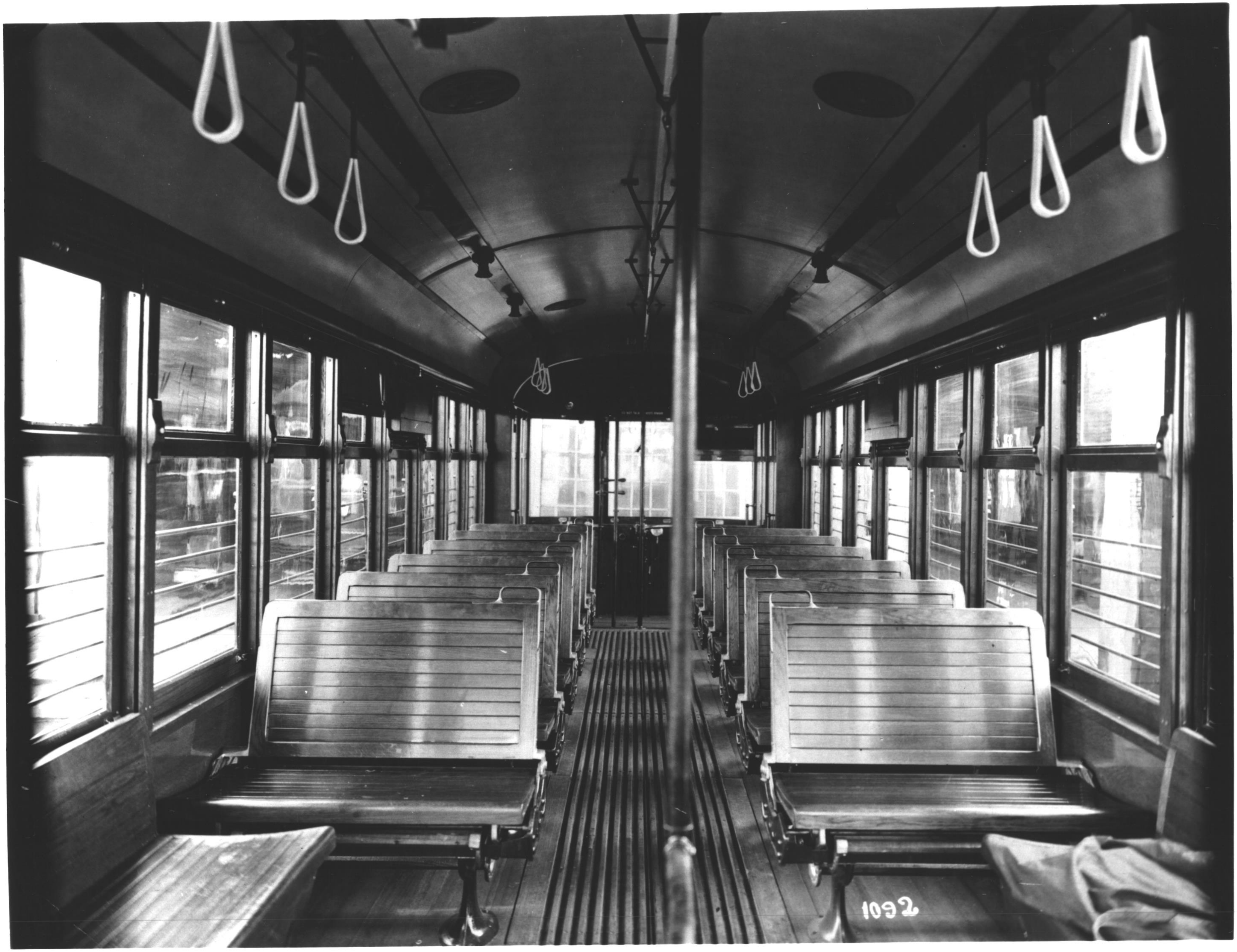
The interior of the St. Cloud cars is almost identical with the Winona series except the ceilings in the Winona cars were covered with veneer panels; the walk-over seats are the same except the Winona cars had 12 and 4 single longitudinal seats instead of the 4 double longitudinal seats and the 8 walk-over seats in the St. Cloud cars. The Winona cars were equipped with air brakes and wheel hand brakes instead of the goose-necks, Also the Destination Sign in front window on the St. Cloud cars extend up to the roof line and no signs on the sides. And the Winona cars had a St. Louis truck and Golden Glow Headlights.

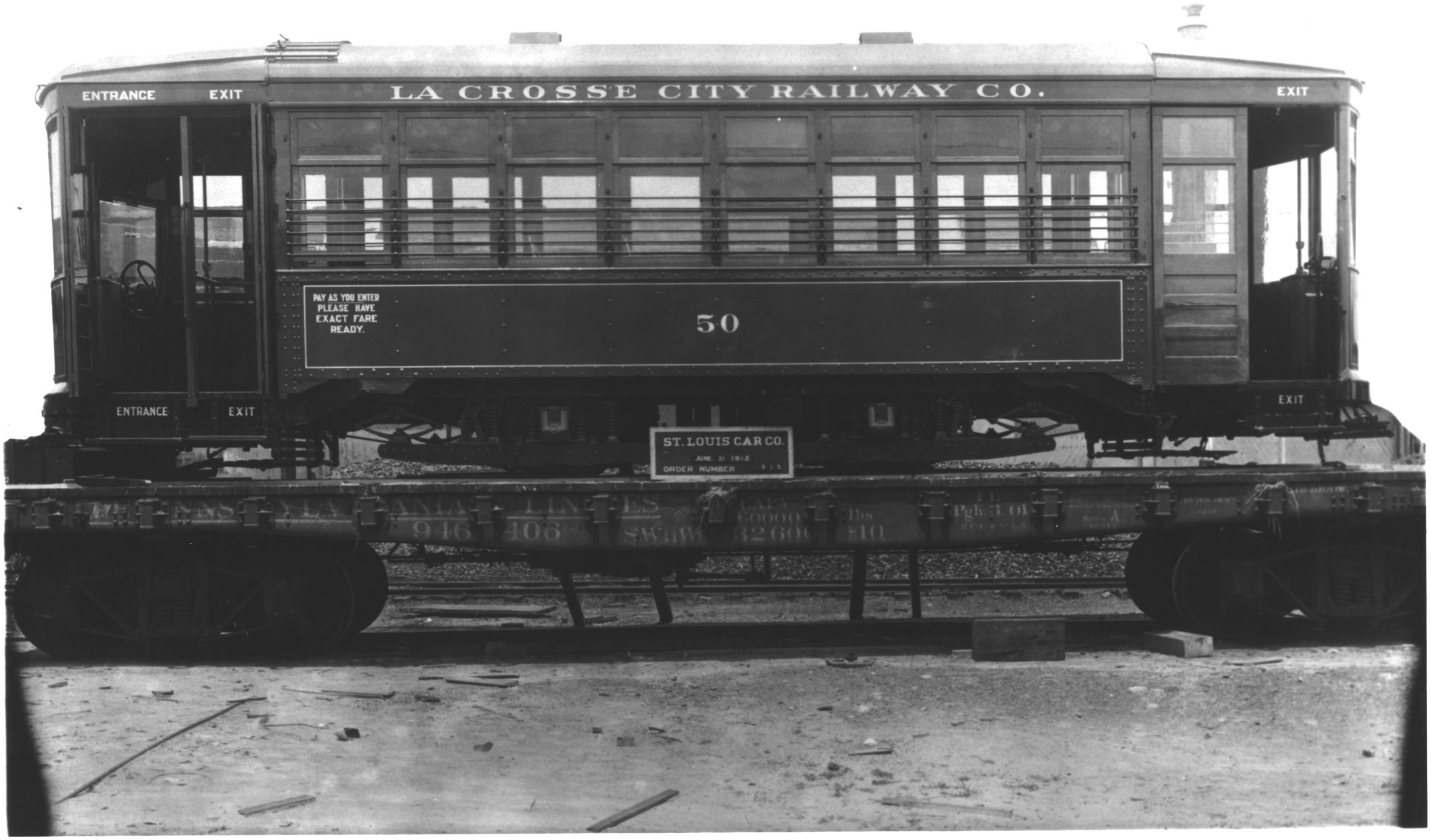

W. R. L. & P. CO.
12
12
PLEASE HAVE EXACT FARE READY
ST. LOUIS CAR CO
MAR 24 1914
ORDER NUMBER 1012
41 FT
Bridge 8/14
NORTHERN PACIFIC 66001
CAPY 7
WT 26600 LB
6

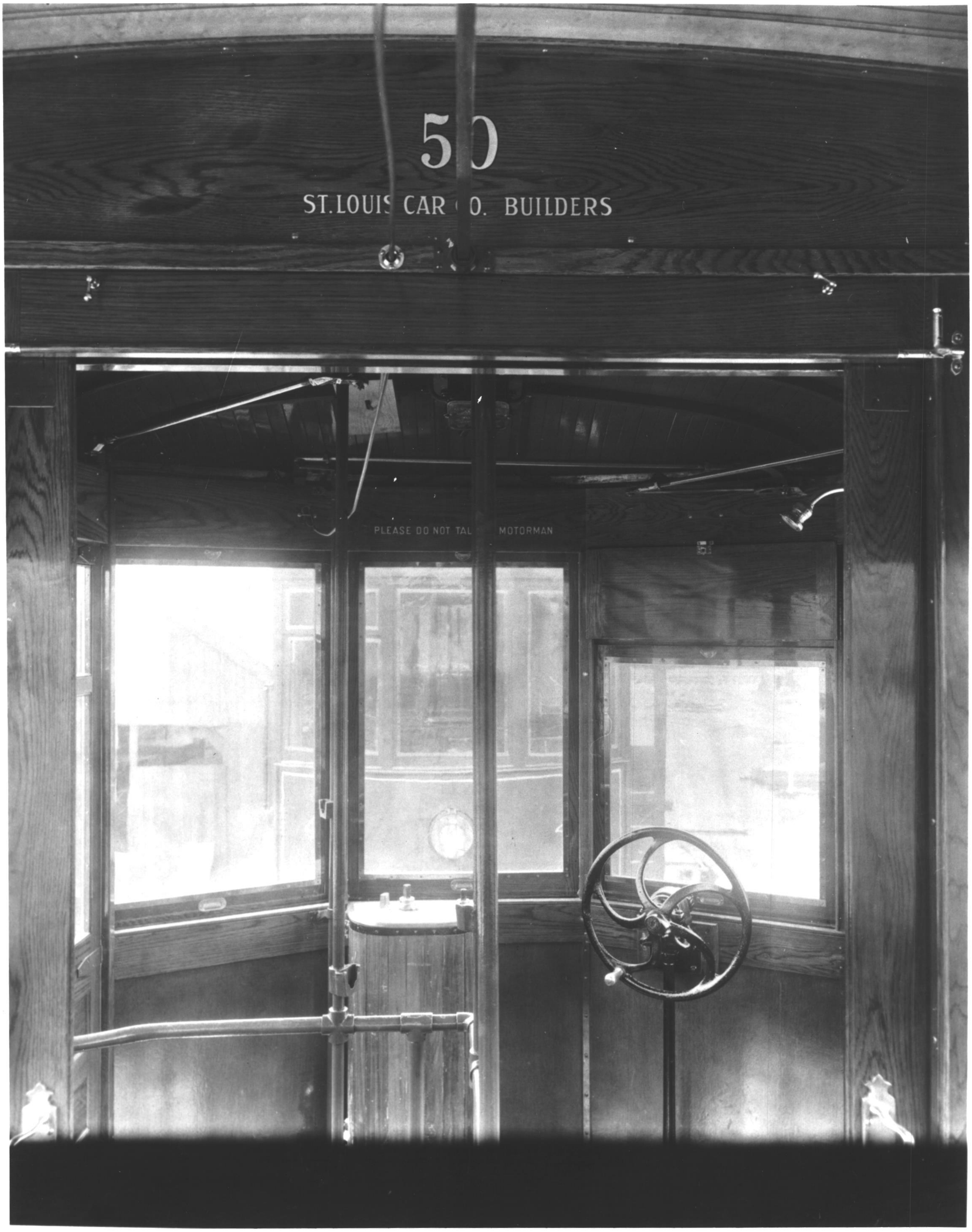

12
ST. LOUIS CAR CO. BUILDERS
39
24
OUT
ST. LOUIS CAR CO.

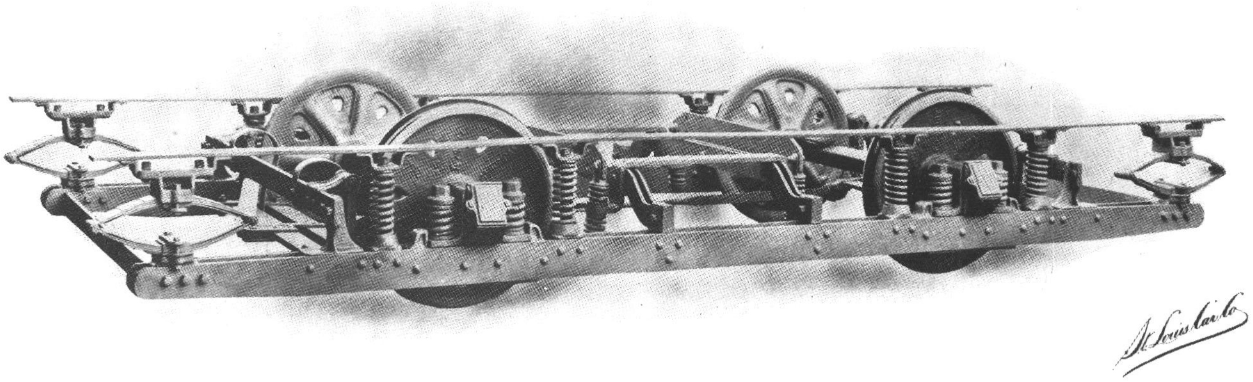

W. R. L. & P. CO.
13
13
PLEASE HAVE EXACT FARE READY
A.C.L.
70087
ATLANTIC COAST LINE
CAP'Y 60000
LENGTH

St Louis Car Co
ORD. 1092


1092


ENTRANCE
EXIT
LA CROSSE CITY RAILWAY CO.
EXIT
PAY AS YOU ENTER
PLEASE HAVE
EXACT FARE
READY.
50
ENTRANCE
EXIT
EXIT
ST. LOUIS CAR CO.
JUNE 21 1912
ORDER NUMBER 915
CAPY 60000 lbs
946406
32600
Pgh. 3. 01


50
ST.LOUIS CAR O. BUILDERS
PLEASE DO NOT TAL MOTORMAN



TRUCK No. 46.

Truck No. 46.

"Du Pont" Type.

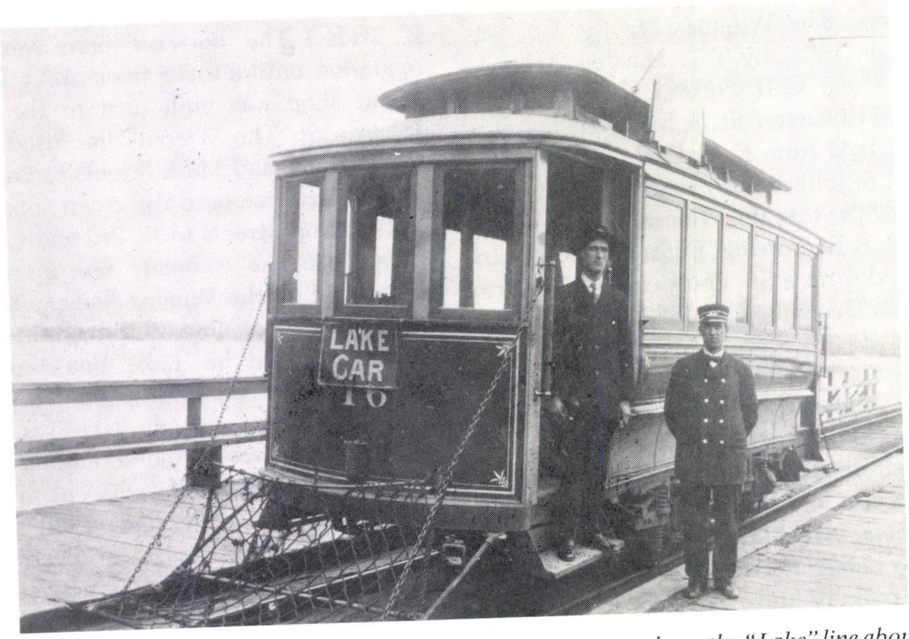
Side frames composed of continuous steel plates, suspended from journal boxes by spring cushioned wrought iron saddles.

Top plates are supported by one elliptic spring at each end and by four coil springs. This construction affords extra long spring base.

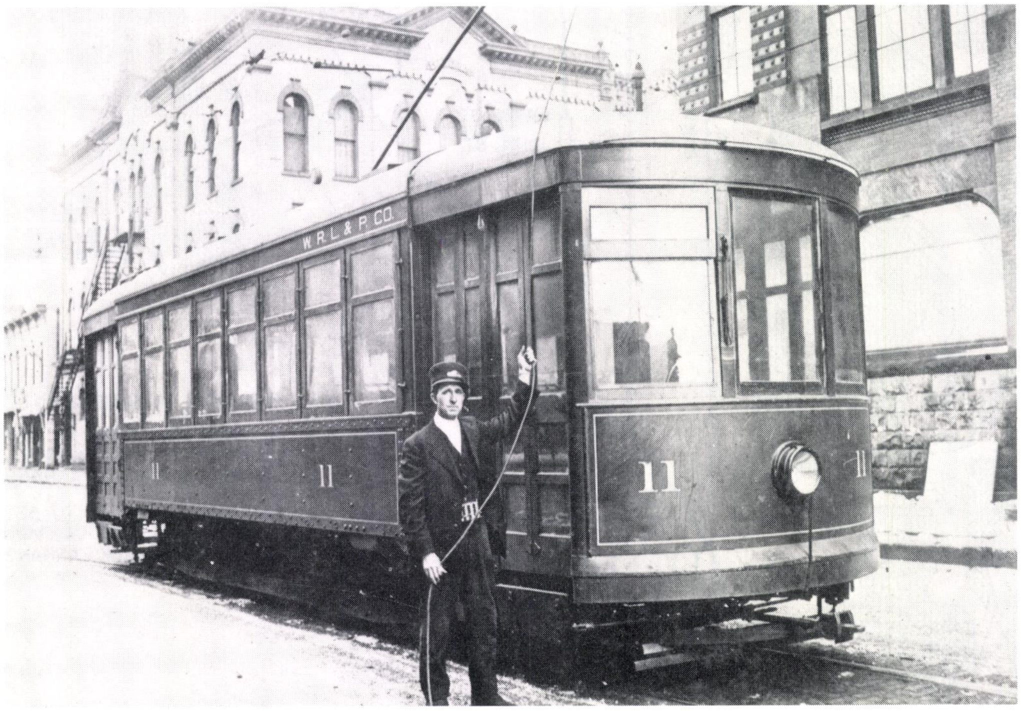
Outside hung brakes.

Wheel base from 6 to 8 ft., as desired.

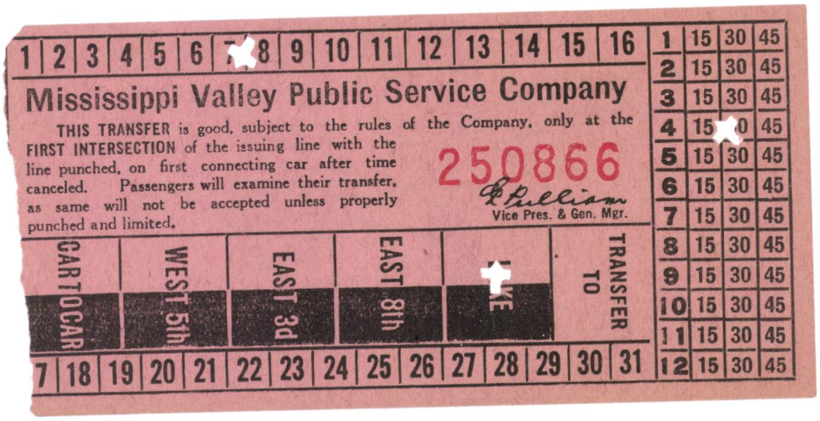
Weight, 7000 pounds.



Winona City Ry. 16 at the south end of the Lake Winona trestle on the "Lake" line about 1909. (Clarence J. Vincent collection)



Wisconsin Ry. Light & Power Co. 11 on the "Lake" line at 3rd and Center Streets about 1914. The car is two-man operated and in its original paint scheme. (Clarence J. Vincent collection)



1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16

Mississippi Valley Public Service Company

THIS TRANSFER is good, subject to the rules of the Company, only at the **FIRST INTERSECTION** of the issuing line with the line punched, on first connecting car after time canceled. Passengers will examine their transfer, as same will not be accepted unless properly punched and limited.

250866

E. Pulliam
Vice Pres. & Gen. Mgr.

CARTOCAR	WEST 5th	EAST 3d	EAST 8th	KE	TRANSFER TO

7 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31

1	15	30	45
2	15	30	45
3	15	30	45
4	15	0	45
5	15	30	45
6	15	30	45
7	15	30	45
8	15	30	45
9	15	30	45
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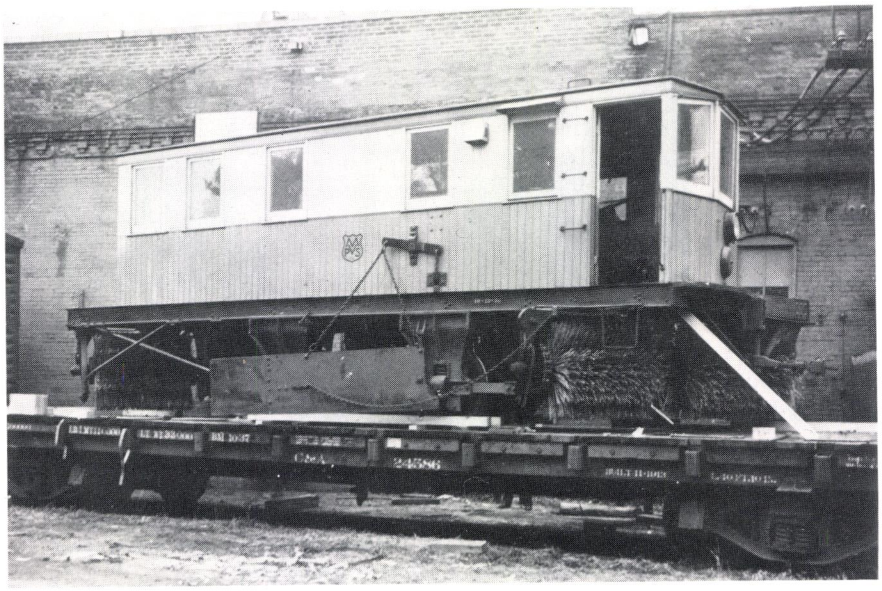
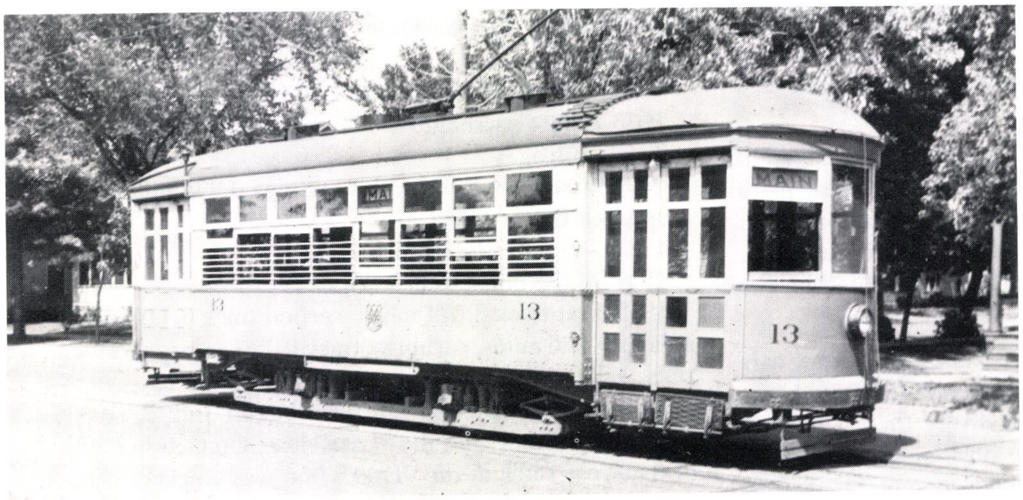
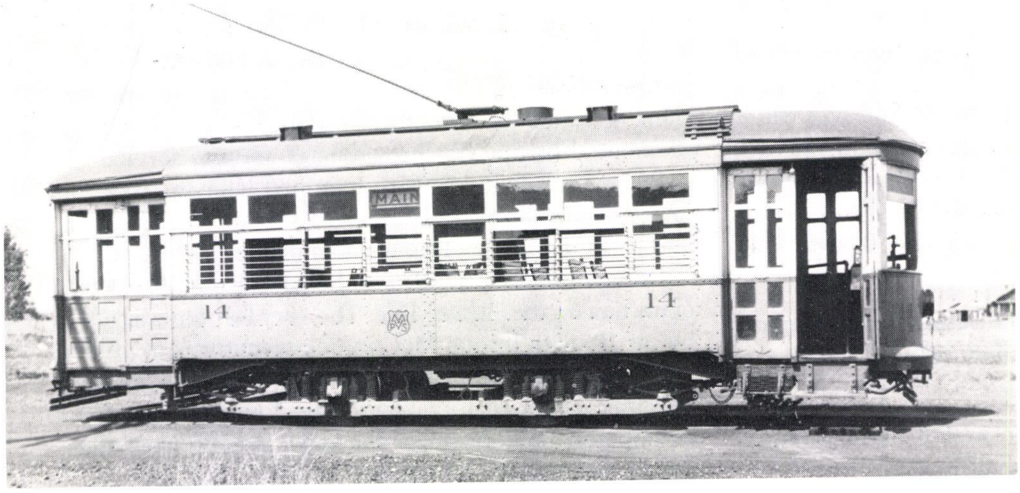
11	15	30	45
12	15	30	45



The Snow Sweeper loaded for shipment from Winona to LaCrosse after the end of operations in 1938. (Clarence J. Vincent collection)



Car 13 of the "Main" line westbound on E. 3rd St., 1933. (Frank Butts)



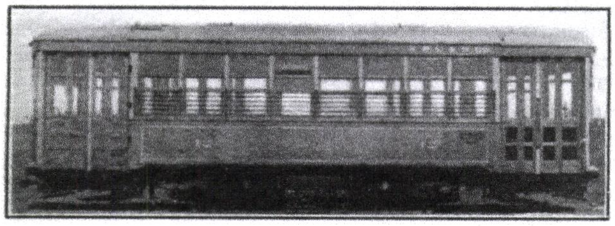
Car 14 at West 5th and Lee Streets, the west end of the "Main" line, about 1933. (Frank Butts)

EXPERIENCE WITH THE ONE-MAN ELECTRIC CAR IN A SMALL CITY

BY R. M. HOWARD, GENERAL MANAGER MINNESOTA DIVISION, WISCONSIN RAILWAY, LIGHT & POWER COMPANY, WINONA, MINN.

The operation of the Winona Railway from its electrification in 1891 to 1911 did not yield sufficient revenue to take care even of the operating expenses. In August, 1911, the property changed hands, and as the result of a number of improvements the gross earnings increased more than 40 per cent with only a temporary rise in operating expenses. The service was then as good as could be reasonably expected in a town of 20,000. Careful study showed that no further opportunities for important reductions in operating expense were available except by the adoption of one-man near-side cars.

The company realized, however, that the co-operation of both the public and employees would be necessary before such a system could be introduced successfully. The matter of buying one-man cars was therefore laid before the local City Council and commercial association, and the economies to be effected were frankly admitted. Photographs of the proposed cars and a description of their equipment and operation were submitted, upon which the proposition of the company was approved and it was urged to go ahead. An order was then placed with the St. Louis Car Company for four new cars and for door-operating mechanisms to equip the old cars retained for one-man service. In all, eight cars are now operated on regular schedule.



WINONA ONE-MAN CAR—VIEW OF CAR

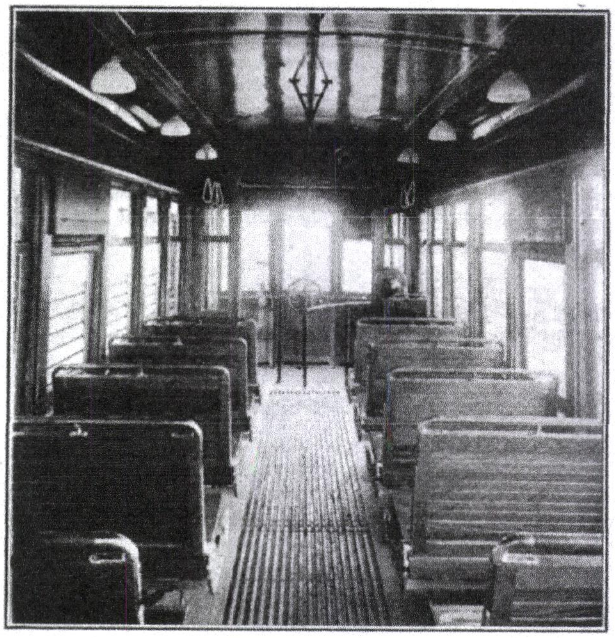
The new cars are of double-end type, 34 ft. 10½ in. over the bumpers, with 6-ft. 3-in. vestibules and an opening 5 ft. wide at the entrance and exit sides. They have steel underframes, steel sides and arch roof, are mounted on St. Louis No. 46 trucks of 8-ft. wheelbase, and are heated with Smith No. 3 hot-air heaters. The controller and brake staff are mounted to the left of the usual location to place the motorman out of the way of entering passengers. The register cord is also located to permit the motorman to ring up fares without moving from his operating position. The entrance and exit vestibule steps of folding type are operated from levers placed between the controller and brake rigging. The electrical equipment consists of two GE-54 motors with K-10 controllers. The old cars measure 29 ft. over all, but have vestibules only 4 ft. 6 in. long with entrance and exit door openings of 26 in. These cars were remodelled for the one-man operation, including the addition of push-buttons and the removal of the bulkhead doors.

For ten days prior to inaugurating the new system the company displayed in the daily papers and also distributed on the cars in dodger form an advertisement which explained the reason for the adoption of the new system, including a frank statement that the earnings did not justify new two-man equipment. Each trainman also received typewritten instructions covering the operation of the new cars, including the registration of fares, issuance of transfers, etc. Fares must be paid before the passengers enter the car, but transfers are issued to passengers as they leave the car.

One-man operation began on May 3, 1914. As the public was well informed regarding the change, the new system went into operation without a hitch. No difficulty has arisen in maintaining the average schedule of 9 m.p.h., but if loops for turning cars at the ends, air brakes and air-operated doors were used an operator could doubtless make faster schedules if traffic conditions so demanded.

PERFORMANCE WITH ONE-MAN CARS

After one and a half months the company saw what one-man cars could do for heavy traffic. The earnings on July 15, 1914, were the largest in its history, exceeding the previous record by 90 per cent. The average earnings for that day were 41 cents per car-mile, the largest number of fares on a single trip 126 and the turn-in from one man, $70.50. Operation on this day was a little slow because all fares had to be collected before the cars were started, but not a step accident occurred. In any event such heavy days form too small a percentage of the yearly operating period to offset the expense of conductors. Railroad crossings are flagged by the motorman in the usual manner, but the saving in the wages of conductors would warrant the maintenance of flagmen on one or two crossings if local conditions made this necessary.



WINONA ONE-MAN CAR—INTERIOR VIEW

ADVANTAGES AND SAVINGS.

The operation of both the new and remodeled cars has produced the usual operating advantages of eliminating step accidents, because the doors are not opened or closed while the car is in motion; of avoiding arguments regarding payment of fare and of easier checking by inspectors because fares are registered as passengers enter. Further the one-man system has greatly decreased the extra list. The percentage of trainmen's wages has also decreased from 29 per cent to 19 per cent of the gross revenue, so that an increase in wages would not affect so materially the ratio of operating expenses to gross income. The apparent discrepancy in the percentages quoted is explained by the fact that the conductors did not work to the end of the line but turned back at the last switches. Hence their hours did not equal those of the motormen.

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The total expense of rebuilding old cars and purchasing new cars was $11,893.55. During the first seven months' operation a saving of $3,549.02 was effected. On the basis of equal mileage for the corresponding period of 1913 and 1914, the difference in the ratio of operating expenses, insurance and taxes to gross earnings is 10.52 per cent in favor of one-man operation. If the two-man system had been retained the net earnings would have been 38.67 per cent less. The savings effected during the first twenty-six months will amortize the entire investment. Only the investment in car bodies and trucks has been considered in the amortization statement because a company which operates old motors can amortize the investment for new motors by applying the saving in motor maintenance cost to the purchase of new motors.

The company's experience has led it to the conclusion that it would be a mistake to remodel small short platform cars and attempt to put the one-man system into operation with such equipment only. At least part of the equipment should be modern with long platforms especially designed for one-man prepayment operation. When all is said and done, the public is the final arbiter and the question is too important to risk the chance of failure due to the lack of proper equipment. If platforms are long enough and the motorman attentive and courteous, the system is bound to be satisfactory from every standpoint. Few street railways can afford to spend anything more than is absolutely necessary, and the one-man car will often place the balance on the right side of the ledger.

INCREASED TAXATION IN WISCONSIN AND ITS EFFECT UPON PUBLIC SERVICE COMPANIES

BY EDWIN GRUHL, ASSISTANT TO THE PRESIDENT, WATERTOWN GAS AND ELECTRIC COMPANY, WATERTOWN, WIS.

The increases in taxes of public service corporations during the last few years have been proportionately greater than the general increase in taxes. The increases have, moreover, far exceeded the rate of growth of the business, whether measured in terms of new capital or in terms of gross or net earnings.

The summarized reports of the several utilities to the Railroad Commission show that during the period 1910 to 1914 taxes paid by gas utilities increased 44.72 per cent as compared with an increase in operating revenues of 24.79 per cent and an increase in gross income before deducting taxes of 14.97 per cent. Where in 1910 gas companies paid 6.07 per cent of their operating revenues in taxes this ratio has increased steadily to 7.04 per cent of their operating revenues for the fiscal year 1914. The percentage of taxes to gross income before deducting taxes shows a similar increase from 21.26 per cent to 26.76 per cent. An examination of the returns of all electric utilities to the Railroad Commission discloses the same tendency to increase. Where during this five year period operating revenues increased 80.33 per cent and gross income before deducting taxes increased 35.83 per cent, taxes paid increased 112.74 per cent. Where electric utilities in 1910 paid 4.45 per cent of their operating revenues as taxes this ratio increased to 5.25 per cent in 1914, while the proportion of gross income available for taxes and return upon the investment which has been paid in taxes increased from 10.17 per cent to 15.92 per cent. Electric railway operating revenues during the five years increased 19.30 per cent, and gross income available for taxes and return upon the investment decreased 10.37 per cent, while taxes continued to increase 15.82 per cent.

Much of the reason for increased assessment of public service corporations rests on the theory that the intangible values of such corporations are peculiar in themselves and are entitled to special classifications and special treatment. These intangibles are frequently referred to in statutes as "rights," "privileges," "franchises" or "corporate excess." Before the advent of commission regulation there was greater reason why unregulated monopolies should be taxed in excess of the amounts contributed by competitive businesses or other classes of property, but such taxes are not levied upon the theory that they were a proper and fair contribution of the corporation to the conduct of government but as a compulsory form of profit-sharing.

While these general descriptive titles may have had their use in the past as a justification for placing larger tax burdens upon public service corporations, the conditions justifying their use have largely disappeared. Under regulation both the commission and the public are demanding that service should be furnished at cost to the utility plus a fair return upon the investment, and in Wisconsin more than in any other state the element of cost has been the controlling factor in the regulation of rates of service. Special taxes, whether in the form of large assessed valuations attributed to franchises or as other public burdens, merely increase the cost and are ultimately shifted upon the customer. It is a mistaken notion, prevalent in many quarters, that this is merely taking money from one pocket to put it in another.

Were even a part of the $1,315,000 contributed by gas companies in taxes last year, the $2,642,000 contributed by electric companies and the $2,412,000 contributed by traction companies applied to finance additional miles of gas mains, electric lines and new tracks, there would be less of criticism that there has been no expansion of the utility business in Wisconsin. Considering that taxes paid in 1914 amount on an average to 7 cents of the cost of gas per 1000 cu. ft. to ½ cent on the cost of electrical energy, to $4 on the annual cost of an arc lamp, and to nearly ½ cent on the cost of carrying a passenger, it is very apparent that the imposition of such indirect taxes has a far-reaching effect upon the average customer's use of the service.

WISCONSIN'S COMPENSATION LAW

BY CARL MUSKAT, MILWAUKEE

Mr. Muskat first mentioned the wide adoption of compensation acts and quoted a large number of judicial opinions concerning their constitutionality and justness. The present Wisconsin act now covers about 250,000 employees and about 600 employers. He noted that public service corporations, unlike others, could not pass the cost of compensation on to the ultimate consumer because they are permitted to charge only a fixed rate for their product.

As to the actual cost of compensation, Mr. Muskat said that the Wisconsin law had already been amended by increasing the maximum payment for permanent total disability to six times the average annual earnings instead of four times. The aggregate compensation payable in Wisconsin also exceeds that of twenty of the twenty-three states with such acts. In Oregon the entire cost does not fall upon the employer. The latter deducts 0.5 per cent of the employee's monthly earnings, not less, however, than 25 cents per month, and himself contributes six times this amount. The state itself contributes one-half of the amount paid by both classes. Compared with this practice and the similar one of Germany, the Wisconsin schedule was certainly very liberal to the employee and should not be increased.

According to the reports of the Wisconsin Industrial

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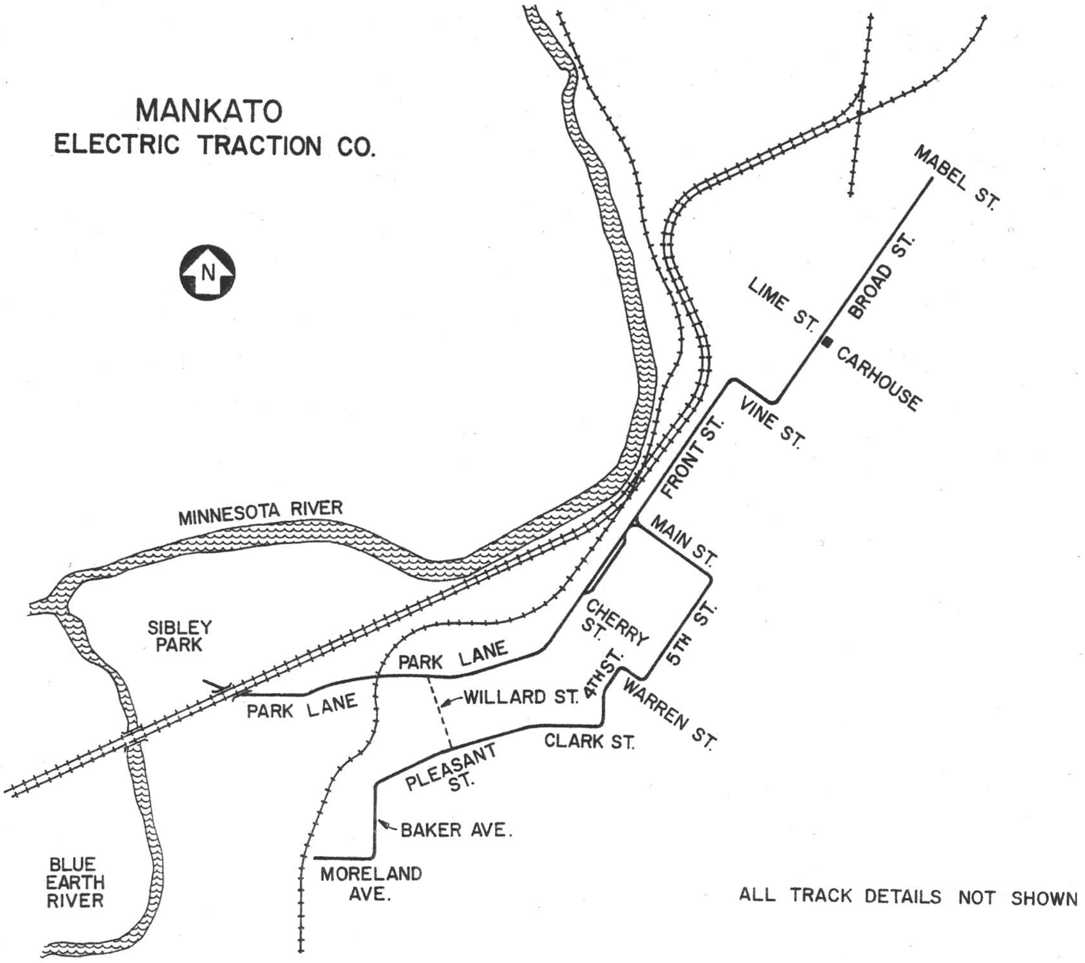
MANKATO ELECTRIC TRACTION COMPANY

MANKATO
ELECTRIC TRACTION CO.


N
MABEL ST.
BROAD ST.
LIME ST.
CARHOUSE
VINE ST.
FRONT ST.
MAIN ST.
MINNESOTA RIVER
SIBLEY PARK
CHERRY ST.
5TH ST.
PARK LANE
PARK LANE
4TH ST.
WILLARD ST.
WARREN ST.
CLARK ST.
PLEASANT ST.
BAKER AVE.
MORELAND AVE.
BLUE EARTH RIVER

ALL TRACK DETAILS NOT SHOWN

MANKATO ELECTRIC TRACTION CO.

Mankato

This city with a 1917 population of 10,365 persons was an early railroad and trade center.

The Horsecar Era

The Mankato Street Railway was organized in June, 1886, by W. M. Farr (president and general manager), John C. Noe (secretary and treasurer), J. A. Willard, Stephen Lamm, G. F. Piper, G. H. Clark, and J. R. Jones. Offices were established at 313 Front St. and construction of a horsecar line on Front St. was completed on July 23, 1886. During May, 1886, three closed horsecars were shipped to Mankato by Robinson & Hitt, carbuilders, of Waterloo, Iowa. According to old records the first three days of operation provided 966, 1033 and 1455 fares respectively.

Subsequent extensions were made as follows:
1. to the CStPM&O Ry. depot at 4th and Washington Streets; and
2. up Center St. and Byron St. during the summer of 1887.

After two or three years the second extension was removed and the tracks relaid on another extension to Sibley Park at the Blue Earth River bridge.

An October, 1888, Street Railway Journal directory listed 3½ miles of 3'6" gauge track laid with 27 lb. steel rail, four horsecars and 14 horses. The 1890 U.S. Census reported 3.50 miles of track, five horsecars and 16 horses. An 1891 Street Railway Journal directory reported 3.50 miles of track, 27 lb. steel rail, six horsecars, and offices located at 121 Hickory St.

However Mankato was proving to be too small a city to support a street railway; patronage was insufficient to pay operating expenses. Some effort was made to convert the lines to electric operation but this also failed. An 1892 directory listed 3.5 miles of track, two horsecars, and three electric motor cars built by the Brownell Car Co. The company was forced into bankruptcy and complete abandonment occurred in October, 1895.

The Electric Car Era

General History

The Mankato Electric Traction Co. was incorporated in August, 1899, although another source reports incorporation in the state of West Virginia during 1907. Officers were W. L. Hixon (president), Mr. Ewing (vice-president), W. D. Willard (secretary-treasurer), and H. E. Hance (general manager).

In 1912 Walter Cummings of the McGuire-Cummings Manufacturing Co. purchased most of the capital stock. During 1913 he sold his interest to the Mississippi Valley Electric Co., Iowa City, Iowa. J. O. Schulze was president; J. H. Rohret, vice-president and treasurer; and F. N. Sueppel, secretary. Offices were located in Iowa City. In 1914 Adolph Mueller was hired as general manager and Superintendent in Mankato and remained as such until the end of streetcar operations. R. S. Williamson was master mechanic in Mankato.

During 1922 the company began operating at a loss. Its financial condition steadily worsened until it entered receivership in 1929. H. Negus of Iowa City was appointed receiver and general manager. Abandonment of all streetcar operations took place March 8, 1930.

Track and Overhead Construction

Construction began in 1907 on two single track electric lines.

1. On N. Broad St. from Mabel St. at Tourtellotte Park to Vine St., on Vine St. to Front St., and on Front St. and Park Lane to Sibley Park. There was a short length of double track on Front St. from Main St. to Cherry St.
2. On Main St. from Front St. to 5th St., on 5th St. to Warren St., on Warren St. to 4th St., on 4th St. to Clark St., on Clark St. to Center St., on Center St. to Byron St., on Byron St. to Pleasant St., and on Pleasant St. to Willard St. A passing siding was located on 5th St. in front of the teachers' college. ~~A passing siding was located on 5th St. in front of the teachers' college.~~ This was called the "Hill Line".

Both lines were opened for service on May 1, 1908.

During 1913 the "Hill Line" was extended on Willard St. from Pleasant St. to Park Lane. During 1919 (one source says about 1917) this trackage was abandoned and a new extension built on Pleasant St. to Baker St., on Baker St. to Moreland Ave., and on Moreland Ave. to Hazel St. near the Milwaukee Road railroad tracks.

As of 1916 the company was listed as owning 5.0 or 5.3 miles of track. As of July, 1918, 5.3 miles of track was reported. The 1923 track mileage was reported as 4.73 miles of main track, 0.33 miles of sidings, and 5.06 miles total track. (2.61 miles in paved streets.) The latter figures remained constant until the abandonment of operations.

Power Generation and Distribution

The Mankato Gas & Electric Co. during 1907 installed one Westinghouse 550 volts 200 KW D.C. Generator belted to one (of two) flywheels of an 18" x 36" Twin City Corliss Engine for street railway purposes. During 1915 one 575 volts D.C. 200 KW Motor-Generator set was installed for the street railway load (probably replacing the steam-powered unit). The Mankato Gas & Electric Co. was subsequently acquired by the Consumers Power Co. which later became Northern States Power Co.

Carhouse

Offices and Carhouse were located at 1103 N. Broad St.

Operations

About 1912-1914 the company was reported to own five passenger motor cars and seven or eight open passenger trailers. Sometimes three or four open trailers were coupled to one motor car on circus or fair days to accommodate the overwhelming business. It was reported that on one circus day approximately 11,000 passengers were transported. The trailers were hard to handle and caused so much trouble that their use was discontinued in 1914.

Cars had been operated with two man crews but for economy reasons they were converted to one-man operation during 1915.

Equipment

The disposition of the three electric passenger motor cars built by Brownell Car Co. owned by the Mankato Street Railway upon its abandonment in October, 1895, is unknown.

Equipment orders by the Mankato Electric Traction Co. as listed in the Electric Railway Journal were as follows.

1907: three single-truck, double-end, closed passenger motor cars from the Danville Car Co., Danville, Illinois. ORDERED 12-28-1907 FOR 1908 DELIVERY.

1908: four single-truck, double-end, closed passenger motor cars, 30'8" long, seating 30 persons, from the McGuire-Cummings Mfg. Co.

1908: one single-truck snow sweeper from McGuire-Cummings Mfg. Co.

Additional equipment was purchased second-hand from the Twin City Rapid Transit Co.

1910: ex-TCRT Co.414, an 18 ft. single-truck, closed passenger motor car built by LaClede Car Co. in 1891.

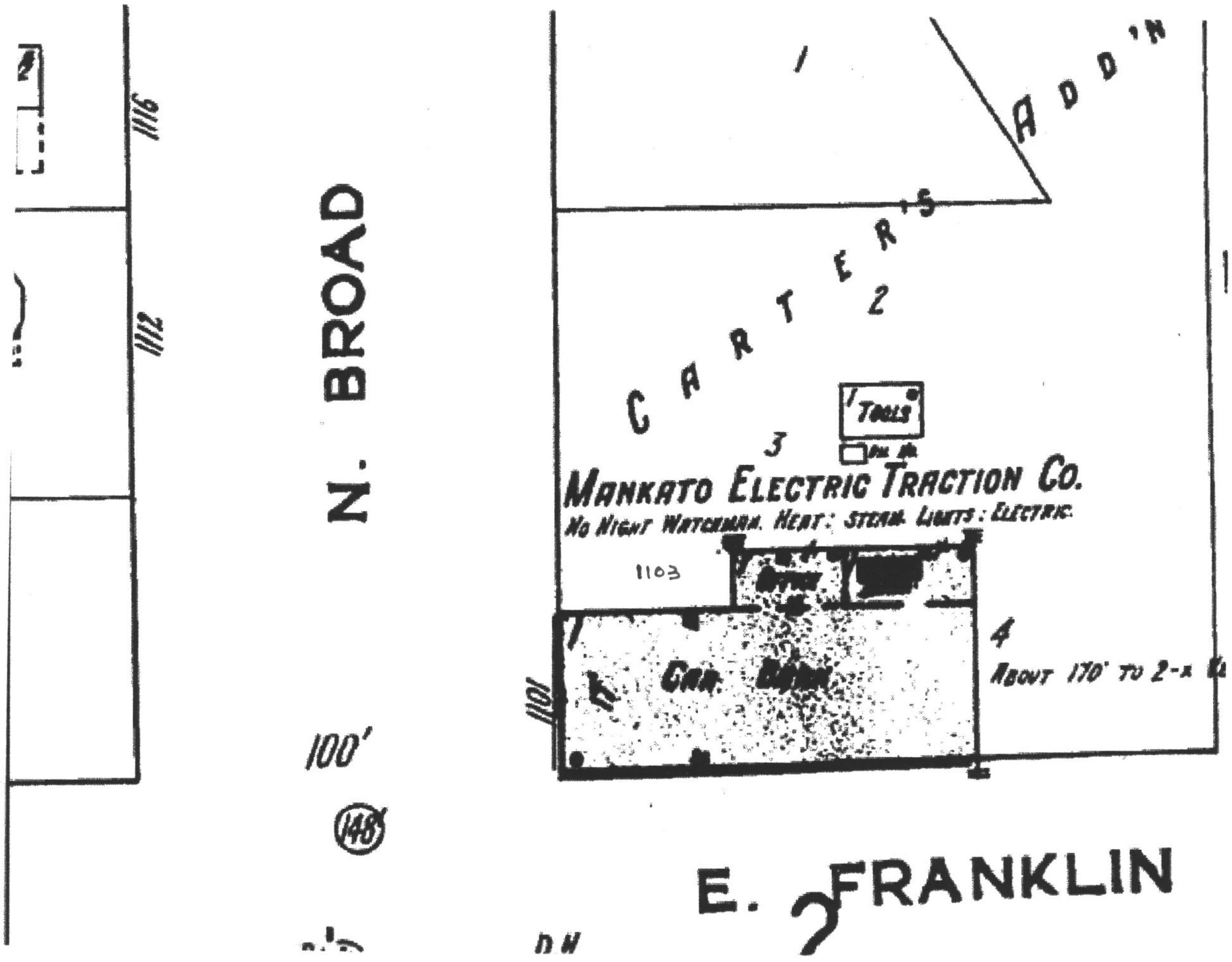
1911: ex-TCRT Co. 526, an 18 ft. single-truck, closed passenger motor car built by Northern Car Co. in 1891. This car was being used as a wrecker at the time it was purchased.

1911: ex-TCRT Co. 587, a 22 ft. single-truck, closed passenger motor car built by J.M. Jones' Sons Car Co. in 1888; lengthened to 22 ft. by TCRT Co. in 1892.

About 1912-1914 the company was reported to own five passenger motor cars and seven or eight open passenger trailers. A single-truck, closed passenger motor car, number 19, was transferred from Iowa City to Mankato at an unknown date. An undated photograph exists of a single-truck, nine-bench, open motor car with turtle-back roof, number 11.

As of 1916 and 1918 the count was 10 cars: eight motor cars and two other cars. An equipment directory as of November, 1923, listed six passenger motor cars, one snow plow (sweeper), and one service trailer. The six passenger cars were reported as three active one-man cars, two extra cars, and one obsolete car.

Dispositions of the cars upon abandonment in March, 1930, is unknown.



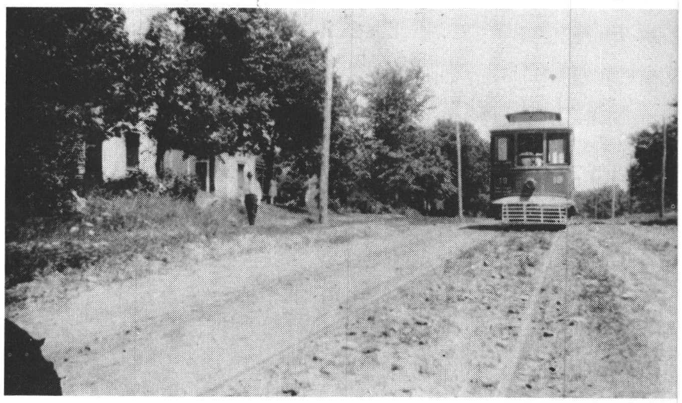
DEC 1914

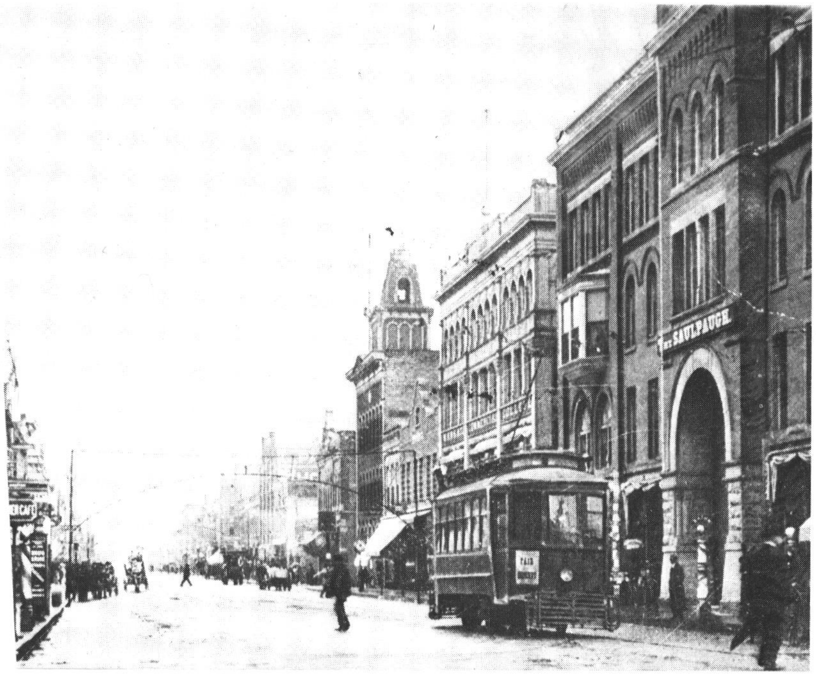
PROPERTY
PURCHASED
1907
132'x173'

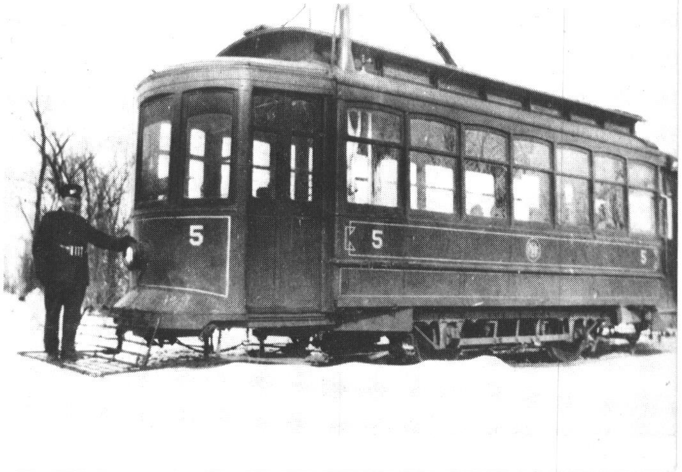
Above right: Car 19 operating on the "Hill" line. (Frank Butts)

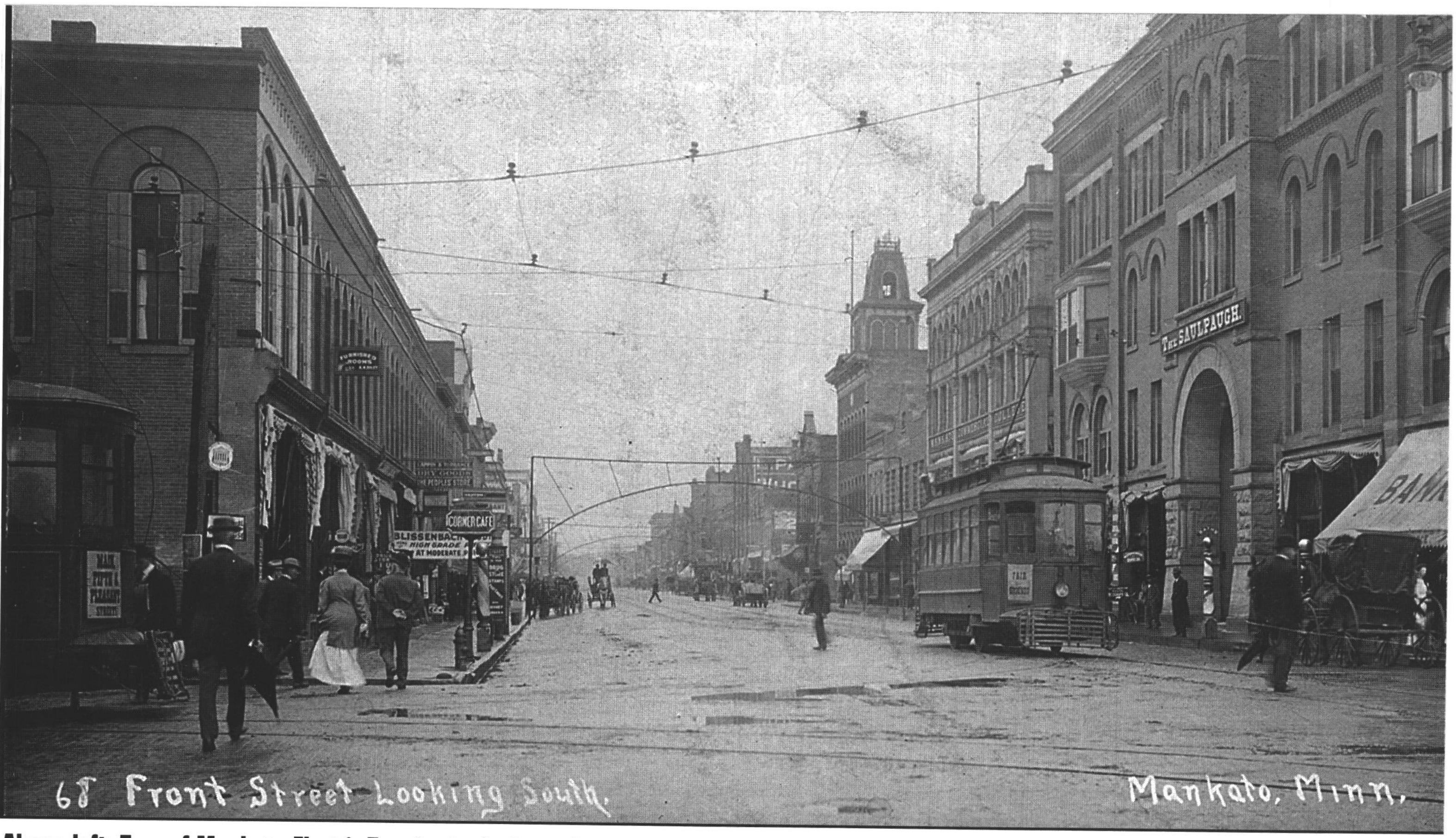
Below right: Car 5 at the west end of the "Hill" line. (Frank Butts)

Below left: Looking south on Front St. from Main St. prior to 1911. (James Foster collection)

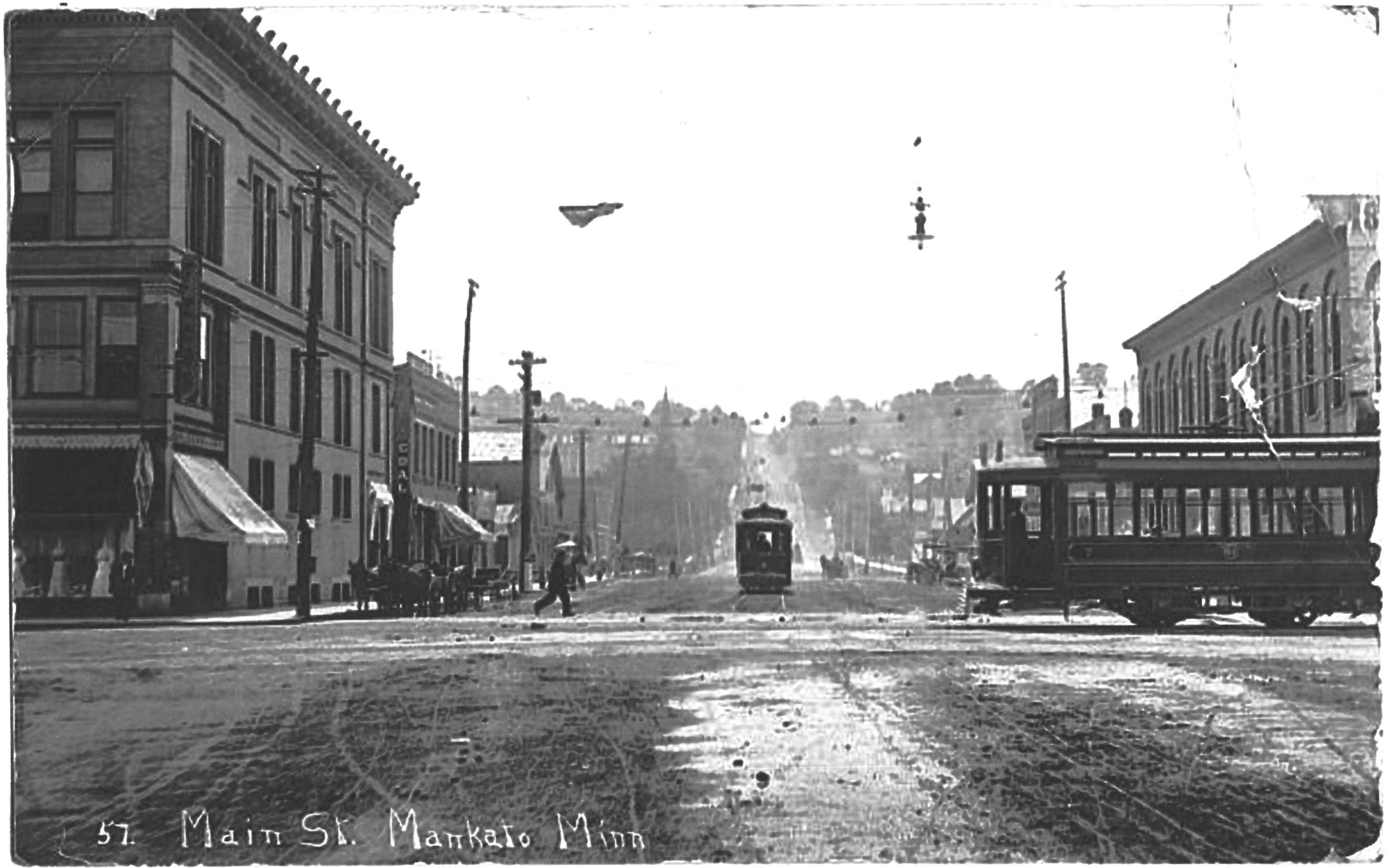



THE SAULPAUGH




68 Front Street Looking South.
Mankato, Minn.
THE SAULPAUGH
CORNER CAFE
BLISSENBACH
FURNISHED ROOMS
THE PEOPLES STORE
BANK

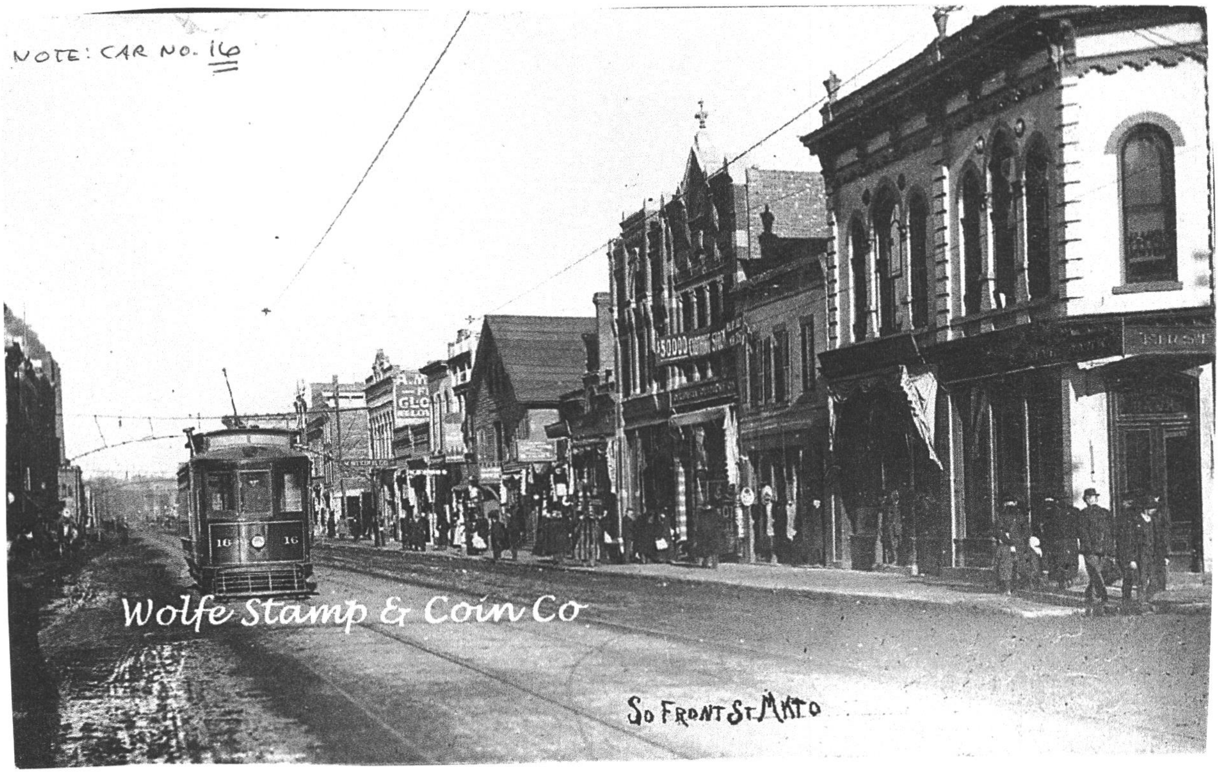
Above left: Two of Mankato Electric Traction's single truckers meet at Front and Main prior to 1911. MTM collection

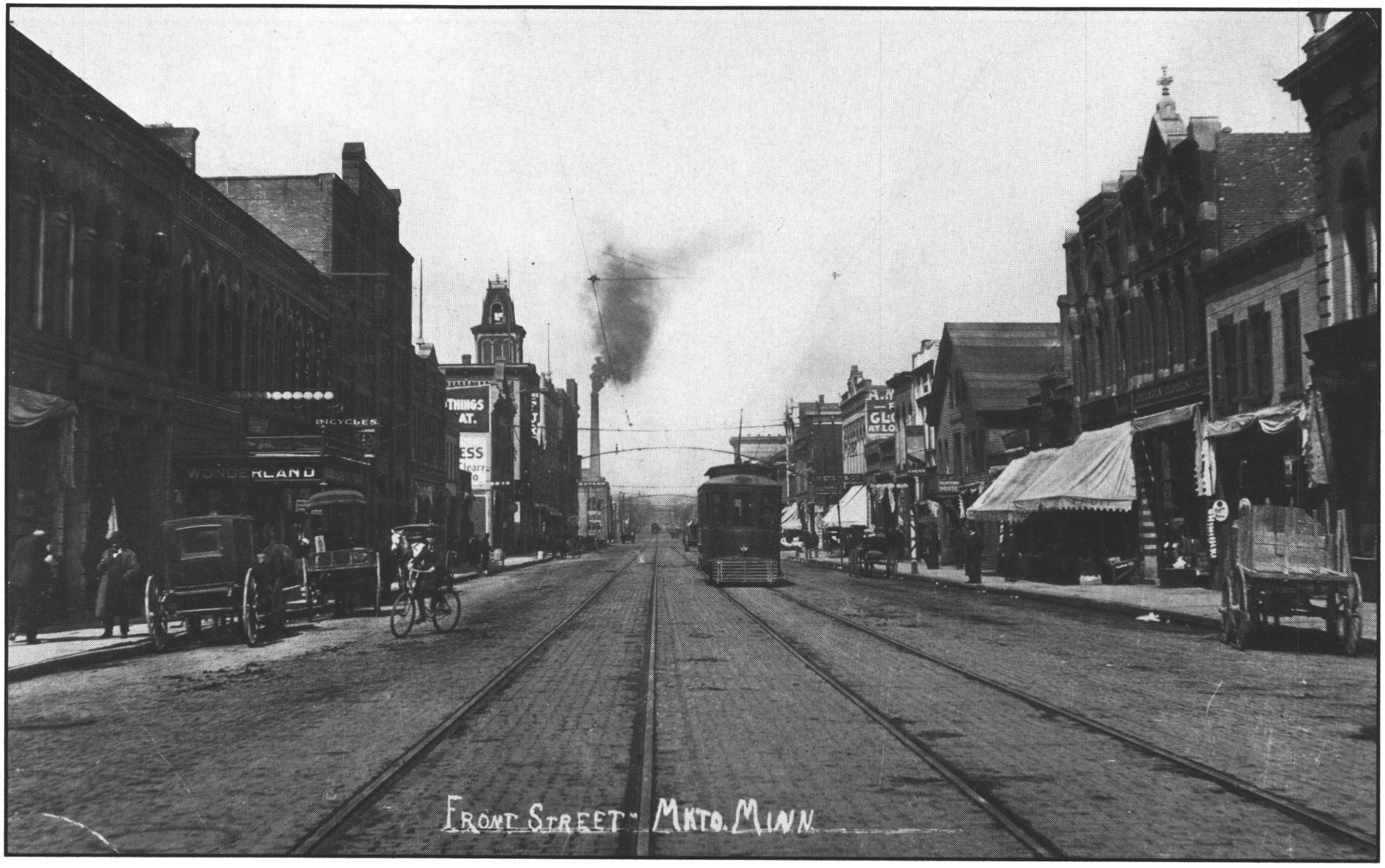


57. Main St. Mankato Minn

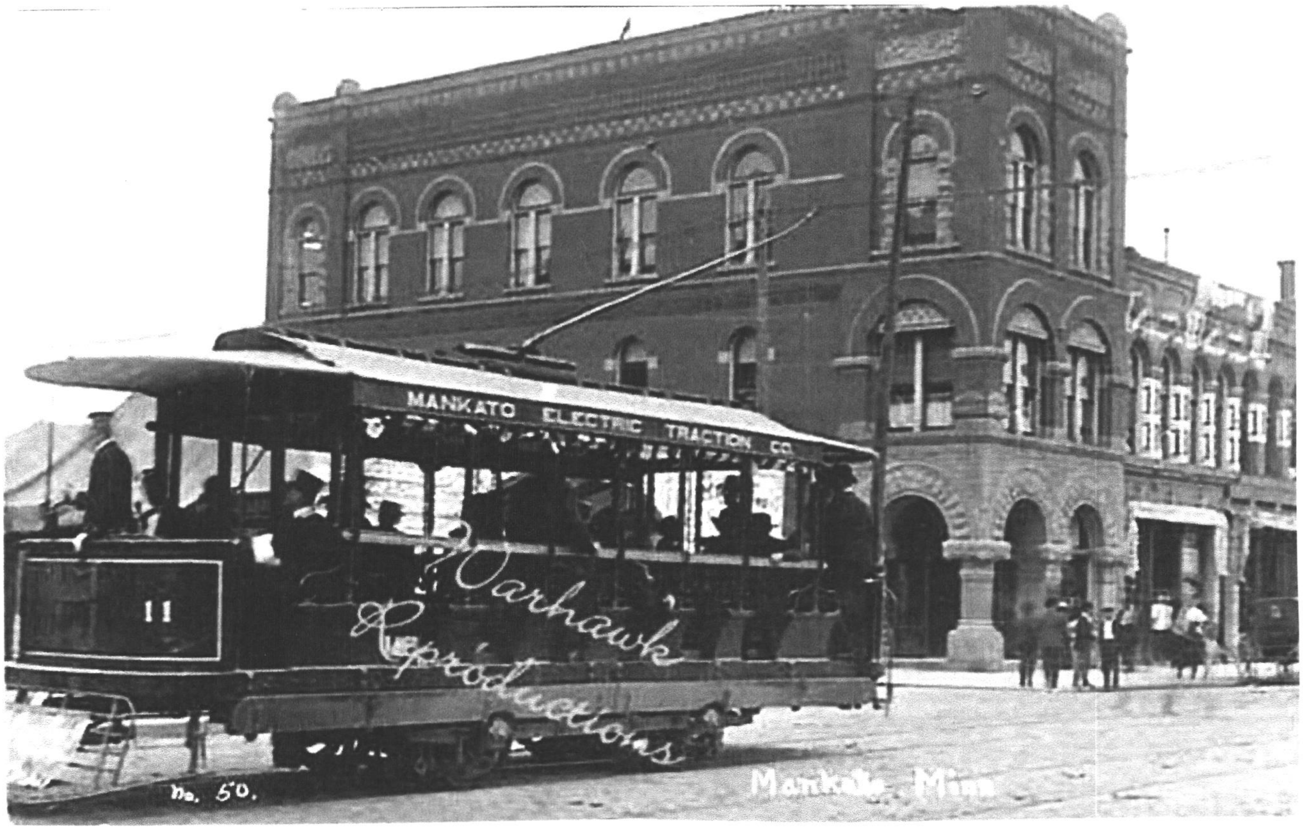
1909

▲ MAIN ST.

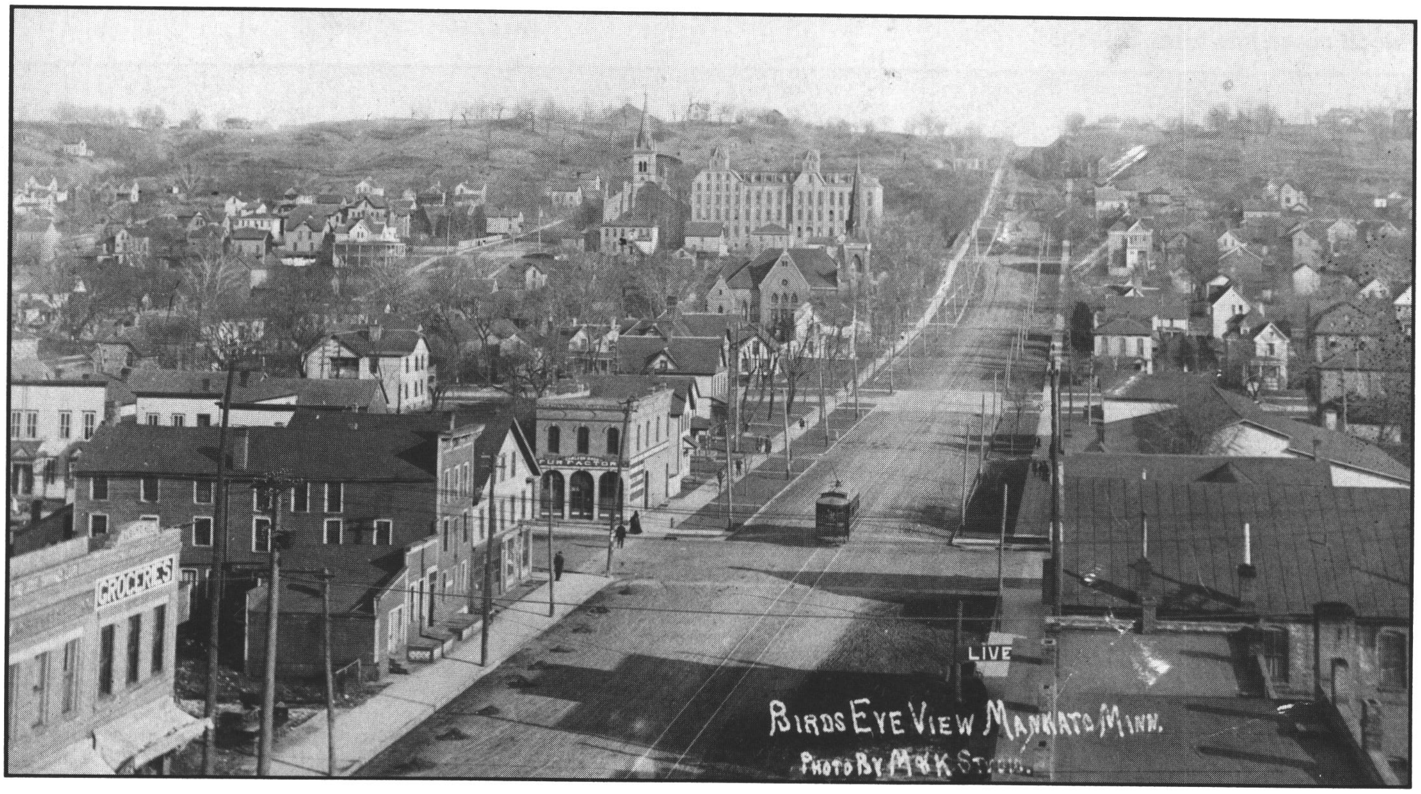

NOTE: CAR NO. 16
16
Wolfe Stamp & Coin Co
So FRONT ST MKTO


BICYCLES
WONDERLAND
FRONT STREET - MKTO. MINN.

Above: The Mankato Electric Traction Co. lasted until 1930. It is shown here westbound on Front Street.


MANKATO ELECTRIC TRACTION CO.
11
No. 50.
Mankato, Minn.
Warhawk Reproductions

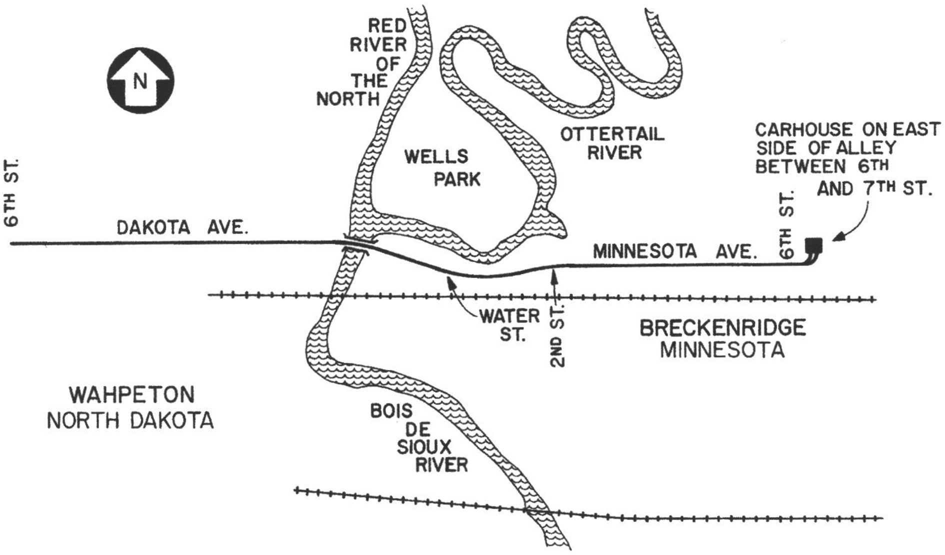
Below: This Mankato car is on Main Street ascending the "Hill" line.

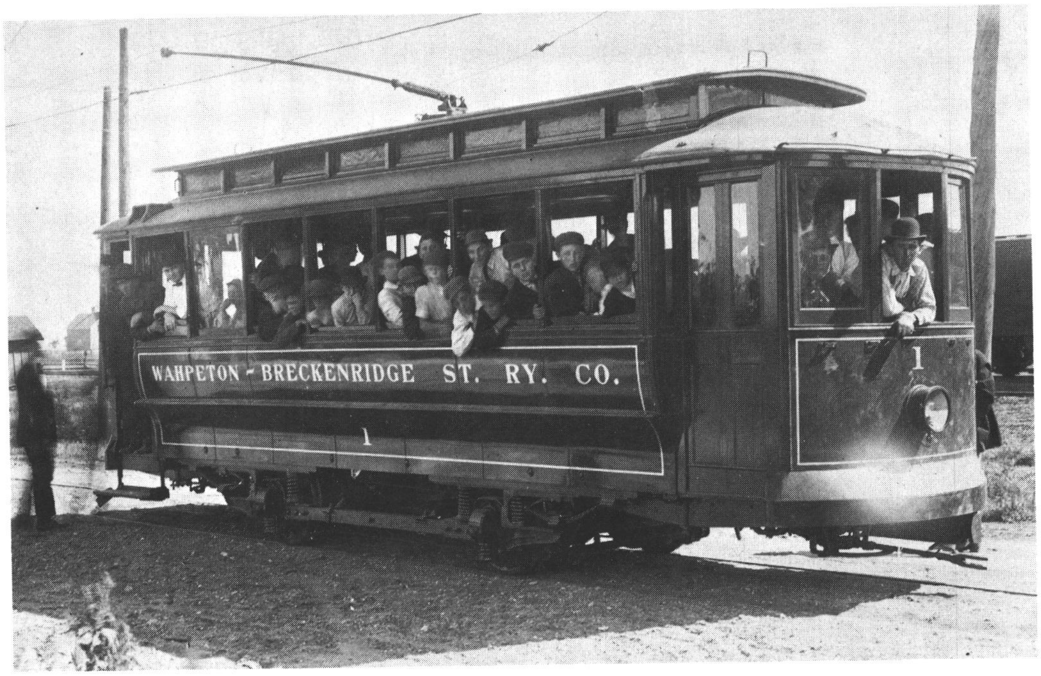

GROCERIES
FUR FACTORY
LIVE
BIRDS EYE VIEW MANKATO MINN.
PHOTO BY M&K STUDIO.

Included here is an intact copy of *Twin City Lines*, Fall 2012 edition.

WAHPETON – BRECKENRIDGE STREET RAILWAY

WAHPETON - BRECKENRIDGE
ST. RY. CO.


N
RED RIVER OF THE NORTH
WELLS PARK
OTTERTAIL RIVER
CARHOUSE ON EAST SIDE OF ALLEY BETWEEN 6TH AND 7TH ST.
6TH ST.
DAKOTA AVE.
MINNESOTA AVE.
6TH ST.
WATER ST.
2ND ST.
BRECKENRIDGE MINNESOTA
WAHPETON NORTH DAKOTA
BOIS DE SIOUX RIVER


WAHPETON - BRECKENRIDGE ST. RY. CO.
1
1

WAHPETON-BRECKENRIDGE STREET RAILWAY COMPANY

Wahpeton, N.D. to Breckenridge, Minn.

These two little cities were important junction and division points on the Great Northern and Northern Pacific railways. They are separated by the Bois de Sioux River which is also the border between Minnesota and North Dakota in this area. One of the shortest interstate streetcar lines in the United States was constructed to connect the two cities. The 1918 population figures were Breckenridge 1,840 persons and Wahpeton 2,467 persons.

The Wahpeton-Breckenridge Street Railway Company was incorporated September 4, 1909, with authorized capital stock of $50,000. Capital stock was sold to citizens of both cities with the result that 250 shares were issued for $25,000. Officers of the company were: Math. Braun, Wahpeton, president; Frank Miksche, Breckenridge, vice-president; E. H. Elwin, Breckenridge, secretary; J. H. Ehlert, treasurer; and F. L. Sturm, general manager.

A single track line was constructed and opened for service August 30, 1910. It consisted of 1.14 miles of line and 1.144 miles of track. A passing track was located in Breckenridge, probably on Water St. The North Dakota track mileage was reported as 0.43 miles; the 1922 U.S. Census listed it as 0.46 miles. Power was purchased from the Ottertail Power Co. at 2,200 volts A.C. and converted to 550 volts D.C. by two General Electric Co. rotary converters with a total capacity of 150 KW. The carhouse, with a capacity of two cars, was located at the east end of the line in Breckenridge. Offices were also located in Breckenridge.

The Electric Railway Journal reported that two single-truck, 30 ft. closed passenger motor cars were ordered in 1910 from the McGuire-Cummings Manufacturing Co. of Paris, Illinois. However the two cars were instead purchased second-hand from A. S. Partridge, St. Louis, a used streetcar dealer. Both were former Chicago City Railway Co. cars.

W-B No.	CCR original number	CCR 1908 number	Pullman's Palace Car Co. Order No.	Date
1	1907	2307	836	1895
2	2161	2323	873	1896

Total cost of road and equipment was $22,500.

The Income Statement for the first fiscal year ended August 31, 1911, was very encouraging.

Passenger Revenue	$12,976		
Advertising Revenue	560		
Gross Income		$13,536	
Operating Expenses including Taxes		(5,490)	40.6%
Net Income		8,046	
Dividends ($25 per share)		(6,250)	
Surplus		1,796	

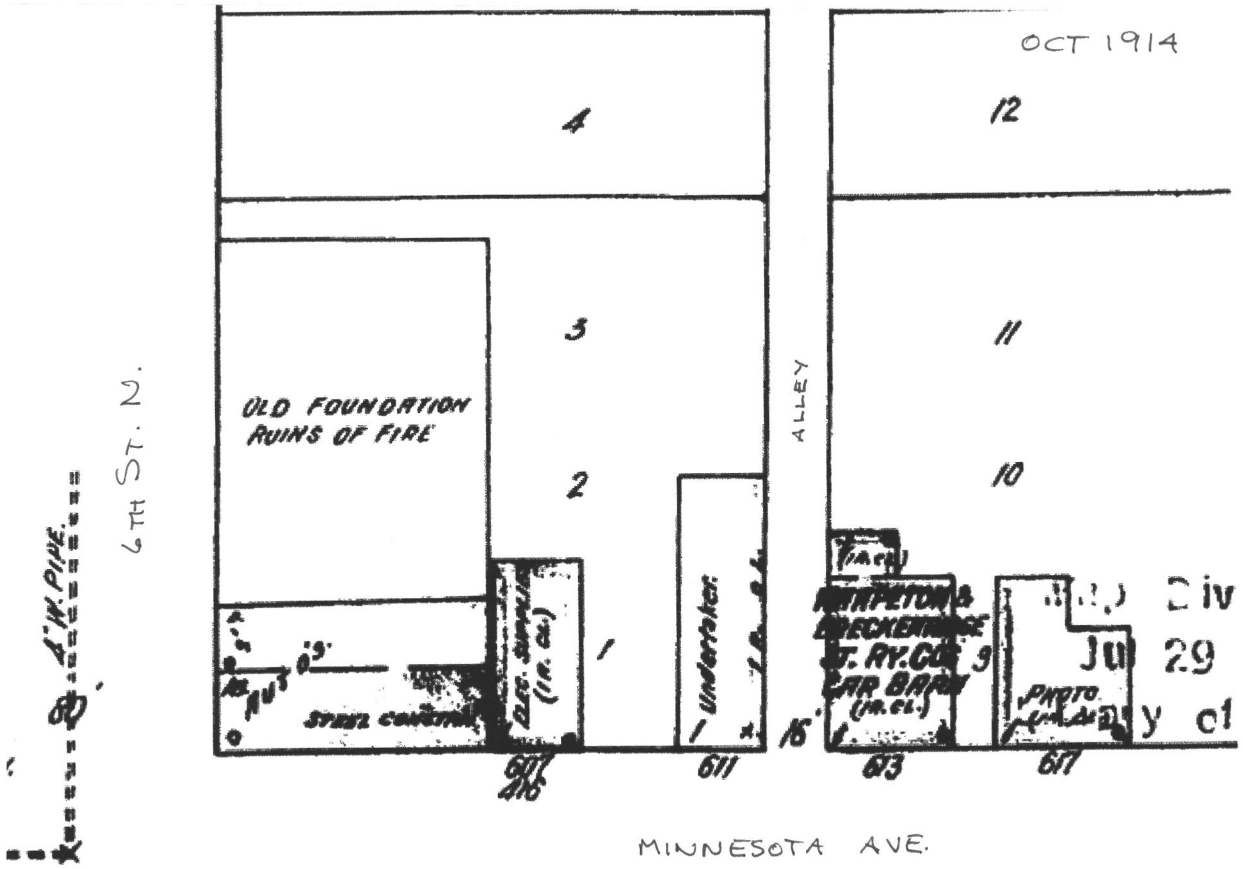
260,275 passengers were carried and 38,771 car-miles were operated. Power consumption was .95 KWH per car-mile.

One car was used in service each day so the two cars were alternated. However photographs indicate that both cars were operated at times. Island Park, later Wells Memorial Park, was located on the line. Running time was approximately five minutes one way with daily service provided over an 18 hour period. Because of its interstate nature the company was subject to state and federal regulation so each five cent fare was strictly accounted for under as much bureaucratic "red tape" as the largest trolley corporation.

McGraw Electric Railway Directories indicate very few changes in the officers of the company.

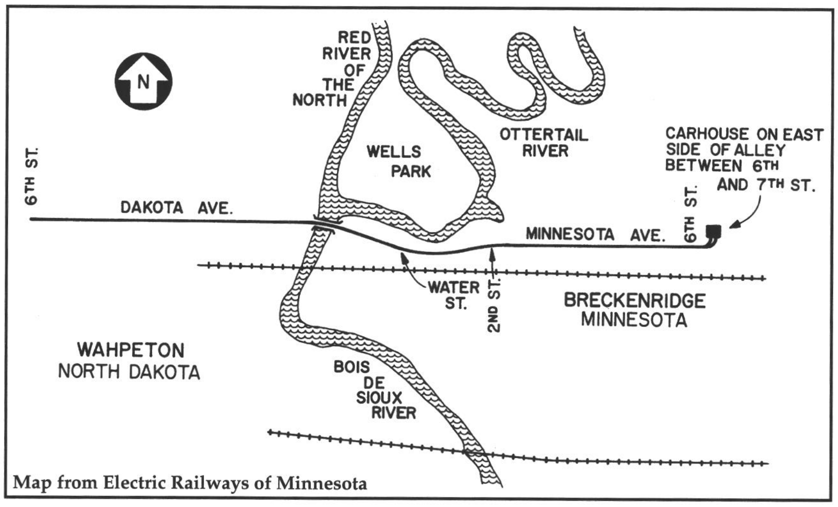
	July 1918	June 1922
Treasurer	R. T. Barber, Wahpeton	R. T. Barber, Wahpeton
General Manager & Purchasing Agent	H. C. Snyder, Breckenridge	Math. Schmitt, Wahpeton
Master Mechanic	not stated	Henry Achter, Wahpeton

In the early years operations were profitable enough to allow payment of reasonable dividends to the stockholders. Automobile competition, rapidly increasing electricity rates, and street paving costs soon created financial difficulties for the little company. In 1921 it was necessary to raise an additional $25,000 for street paving and track rebuilding which pushed the company into bankruptcy in 1922. Operations finally came to an end on March 31, 1925, leaving 125 disillusioned stockholders.

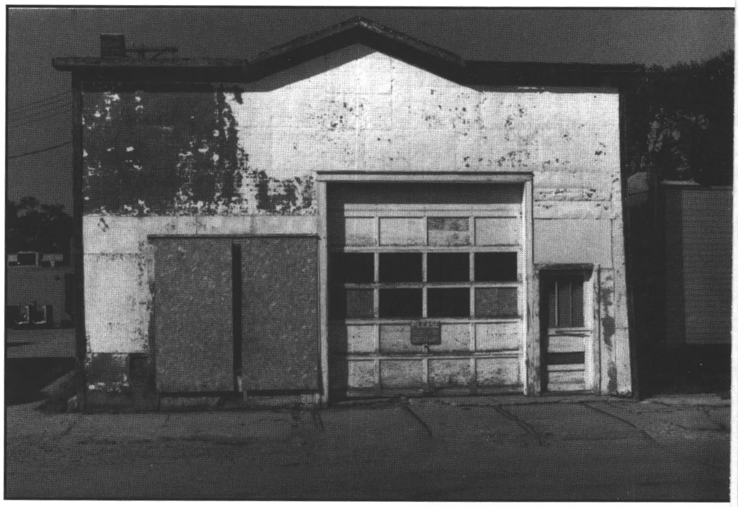

OCT 1914
4
12
3
11
OLD FOUNDATION RUINS OF FIRE
ALLEY
2
10
6TH ST. N.
4" W. PIPE
80
1
ELEC. SUPPLIES (IR. CL.)
STEEL CEILING
Undertaker
WAHPETON & BRECKENRIDGE ST. RY. CO.'S CAR BARN (IR. CL.)
9
PHOTO
15'
607
416
611
613
617
MINNESOTA AVE.

WAHPETON - BRECKENRIDGE STREET RY.

The shortest interstate streetcar line in the nation ran from Breckenridge, MN to its sister city, Wahpeton, ND. The two towns combined had a population of about 4300 in 1918. About half of the 1.14 mile line was in each state. Operations began in 1910 with two second hand Pullman single truckers. Both were built for the Chicago City Railway. Although they appear identical, they were from different orders and differ very slightly. #1 was CCR #1907, built in 1895. #2 was CCR #2161, built in 1896. The cars were used on alternate days. Service ran 18 hours a day. A one way trip took only five minutes, implying a 15 minute frequency. The line was profitable in its early years, but auto competition soon took its toll. The cost of a street repaving project drove the company into bankruptcy in 1921, and operations finally ceased on March 31, 1925. A visit to the local county historical societies turned up this trove of previously unpublished photos.

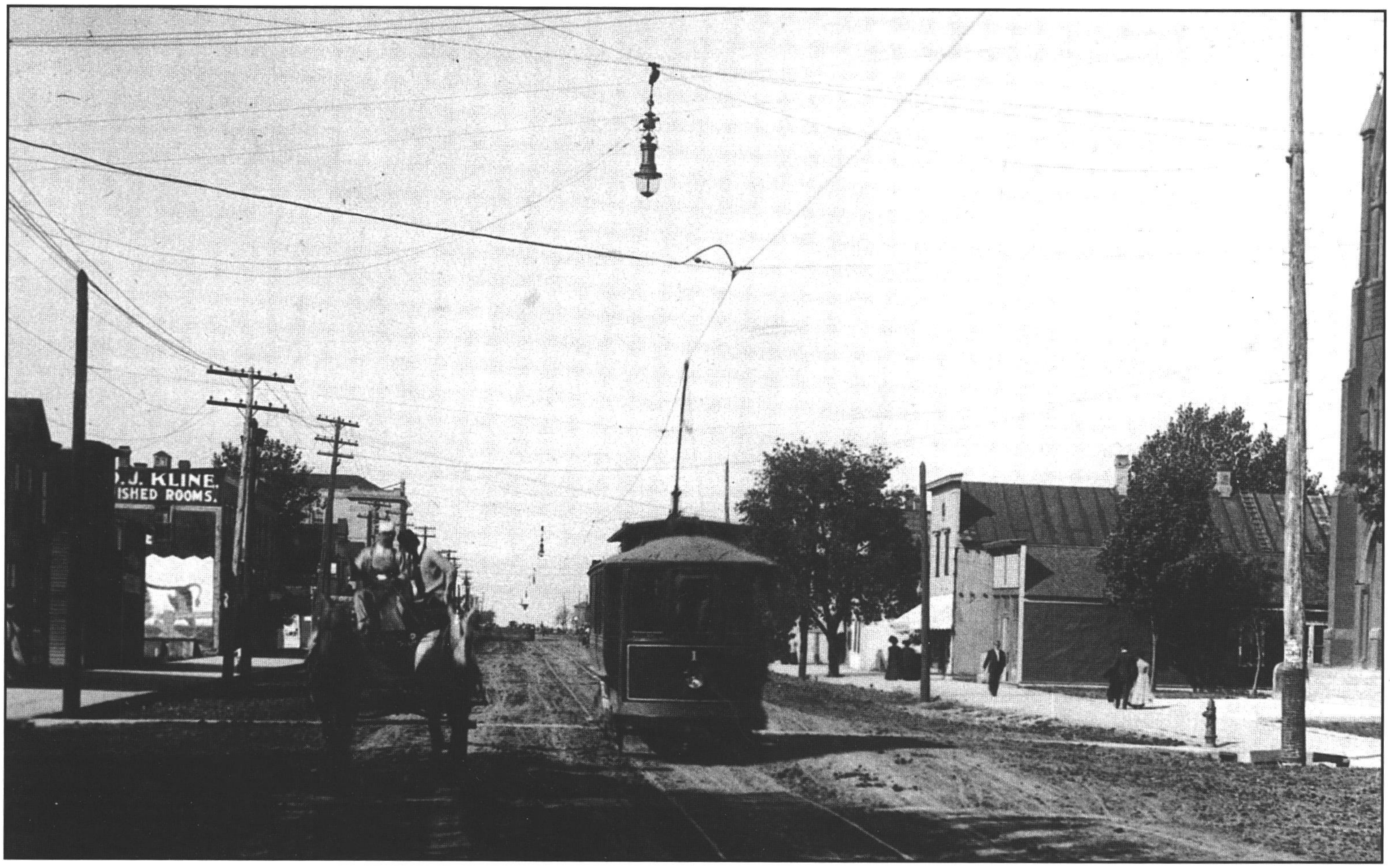

N
RED RIVER OF THE NORTH
WELLS PARK
OTTERTAIL RIVER
CARHOUSE ON EAST SIDE OF ALLEY BETWEEN 6TH AND 7TH ST.
6TH ST.
DAKOTA AVE.
MINNESOTA AVE.
6TH ST.
WATER ST.
2ND ST.
BRECKENRIDGE MINNESOTA
WAHPETON NORTH DAKOTA
BOIS DE SIOUX RIVER

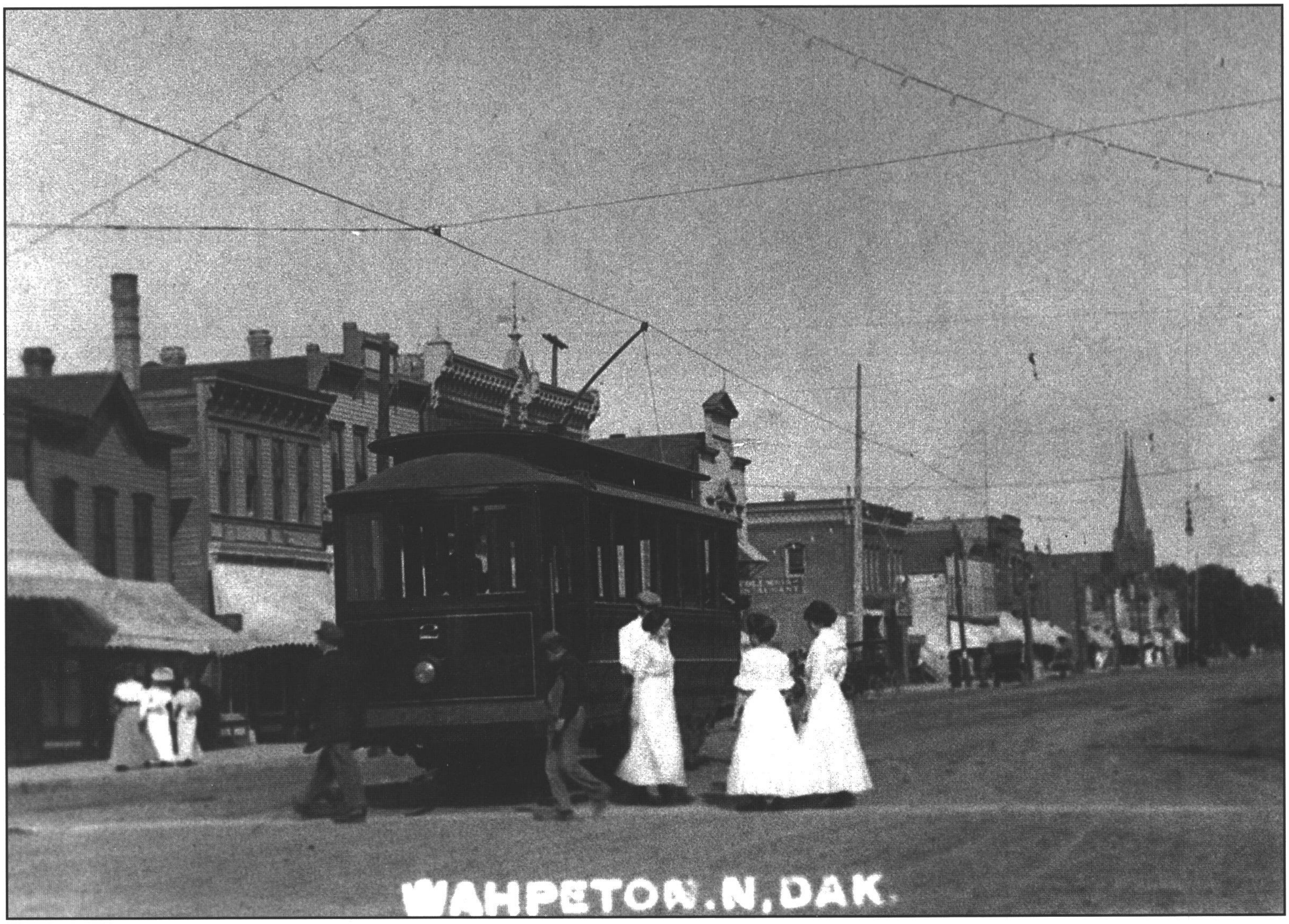
Map from Electric Railways of Minnesota

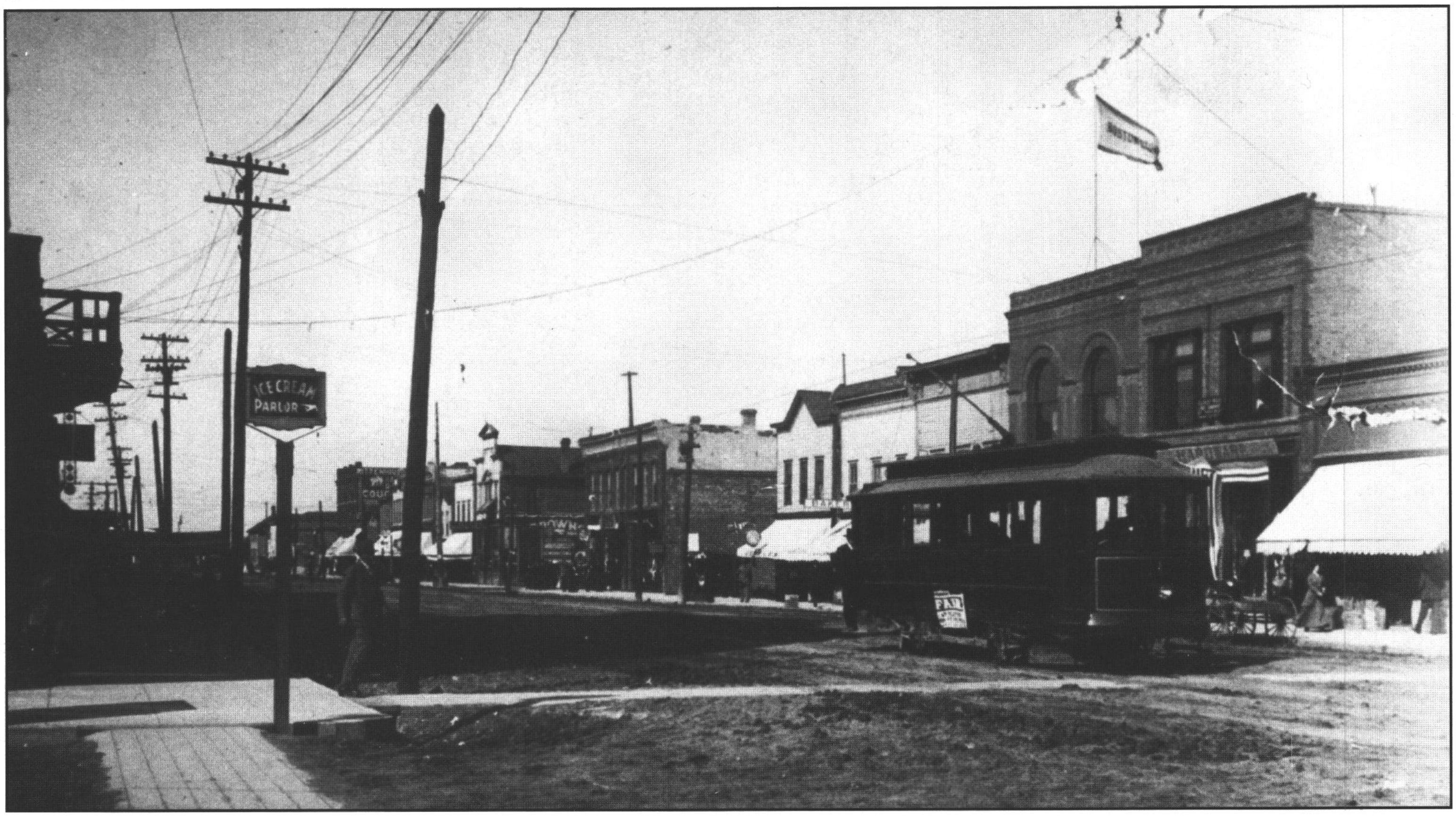


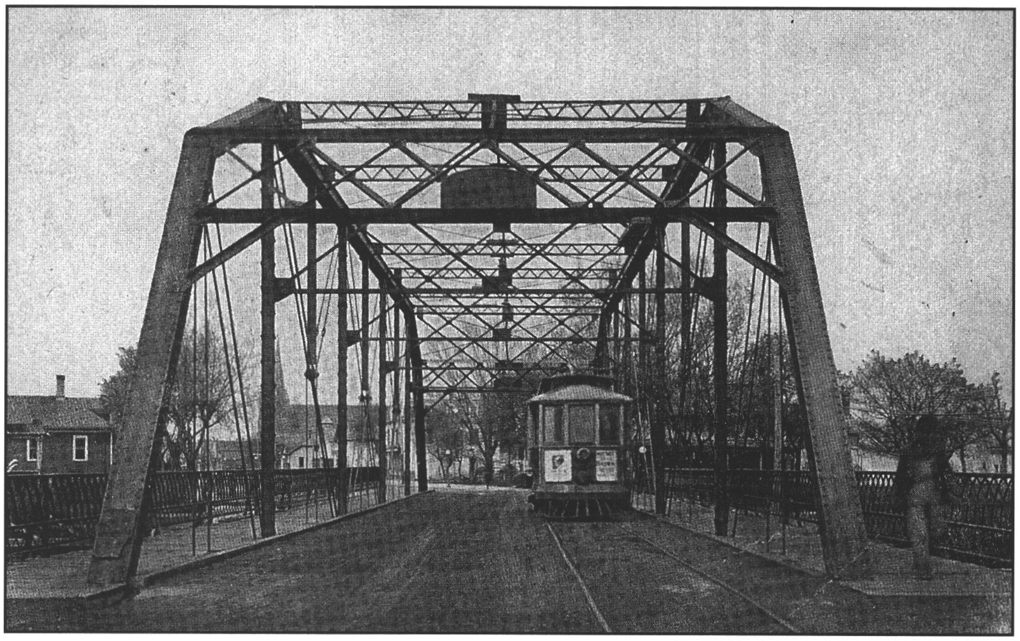
Defying all the odds, the Breckenridge carbarn that saw its last streetcar 72 years ago in 1925 still stands, and the tracks still emerge from beneath the Minnesota Avenue asphalt. Vacant for some years now, the building's interior shows no signs of its former use. Aaron Isaacs photo.

These three views move from west to east along Dakota Avenue in Wahpeton. All Richland County Historical Society collection.


J. KLINE.
ISHED ROOMS.
1


WAHPETON.N,DAK.


ICE CREAM PARLOR
FAIR

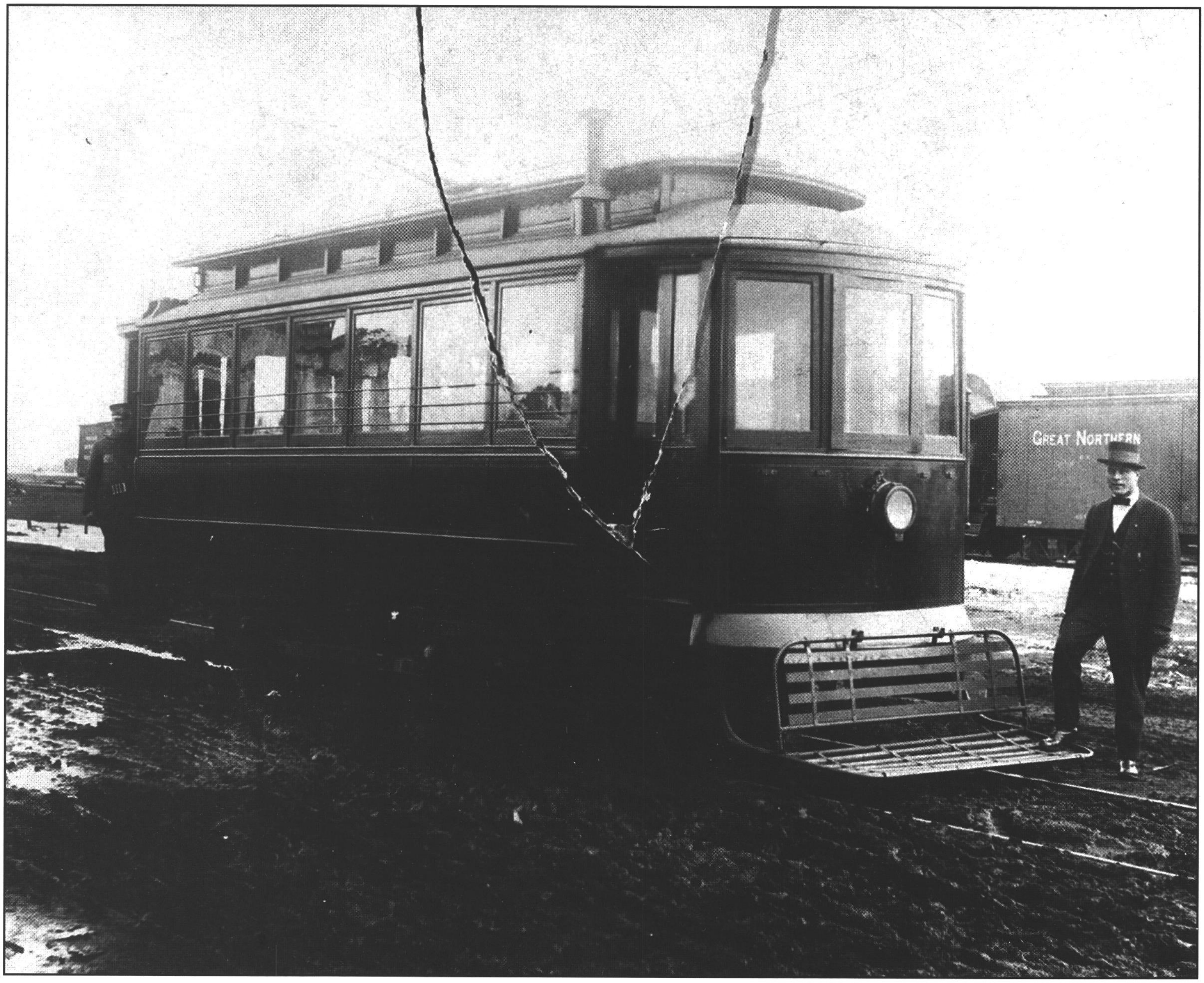


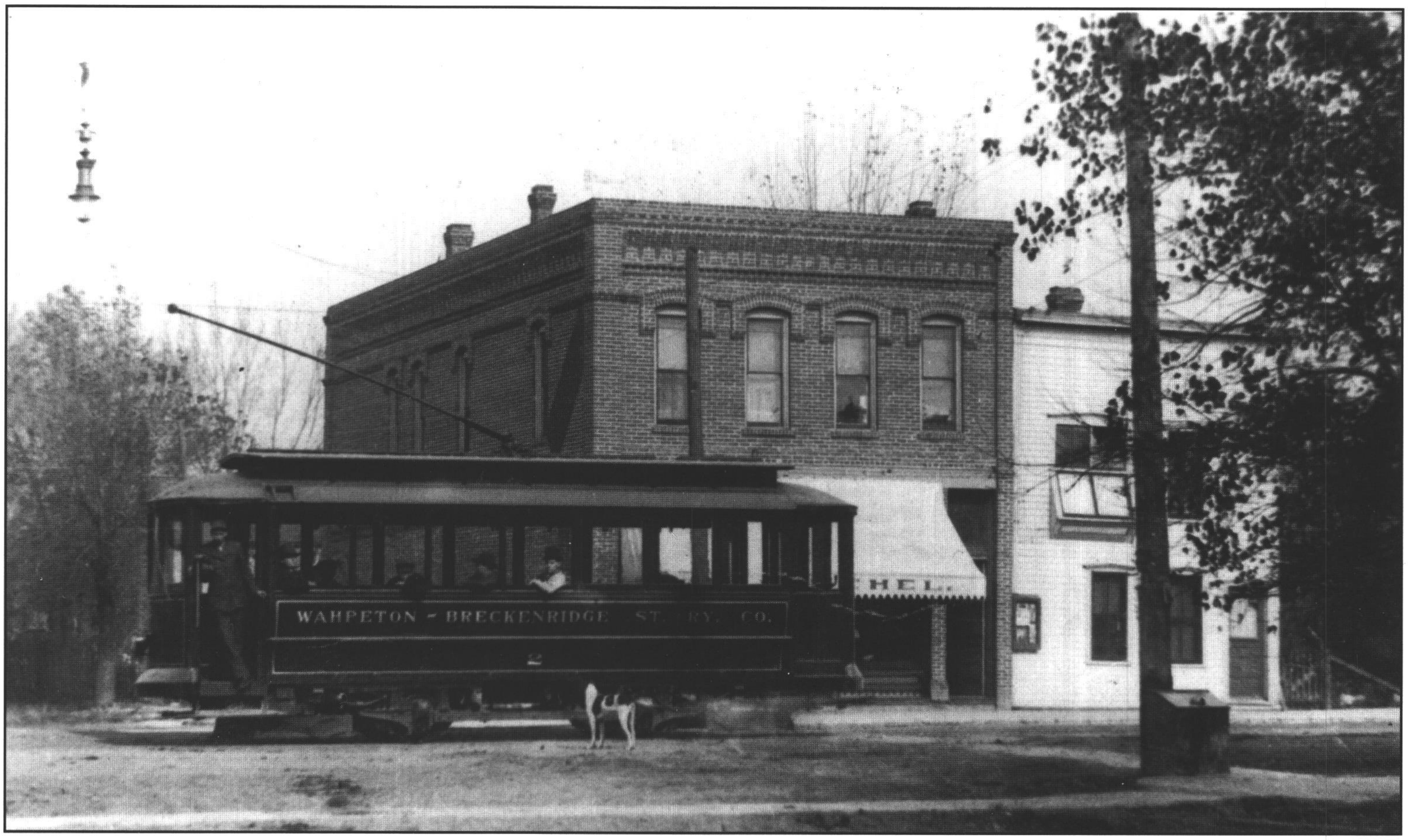
The scenic highlight of each trip was the interstate bridge over the Bois de Sioux River. This view looks west from the Minnesota side. Note the crude pilot. MTM collection.

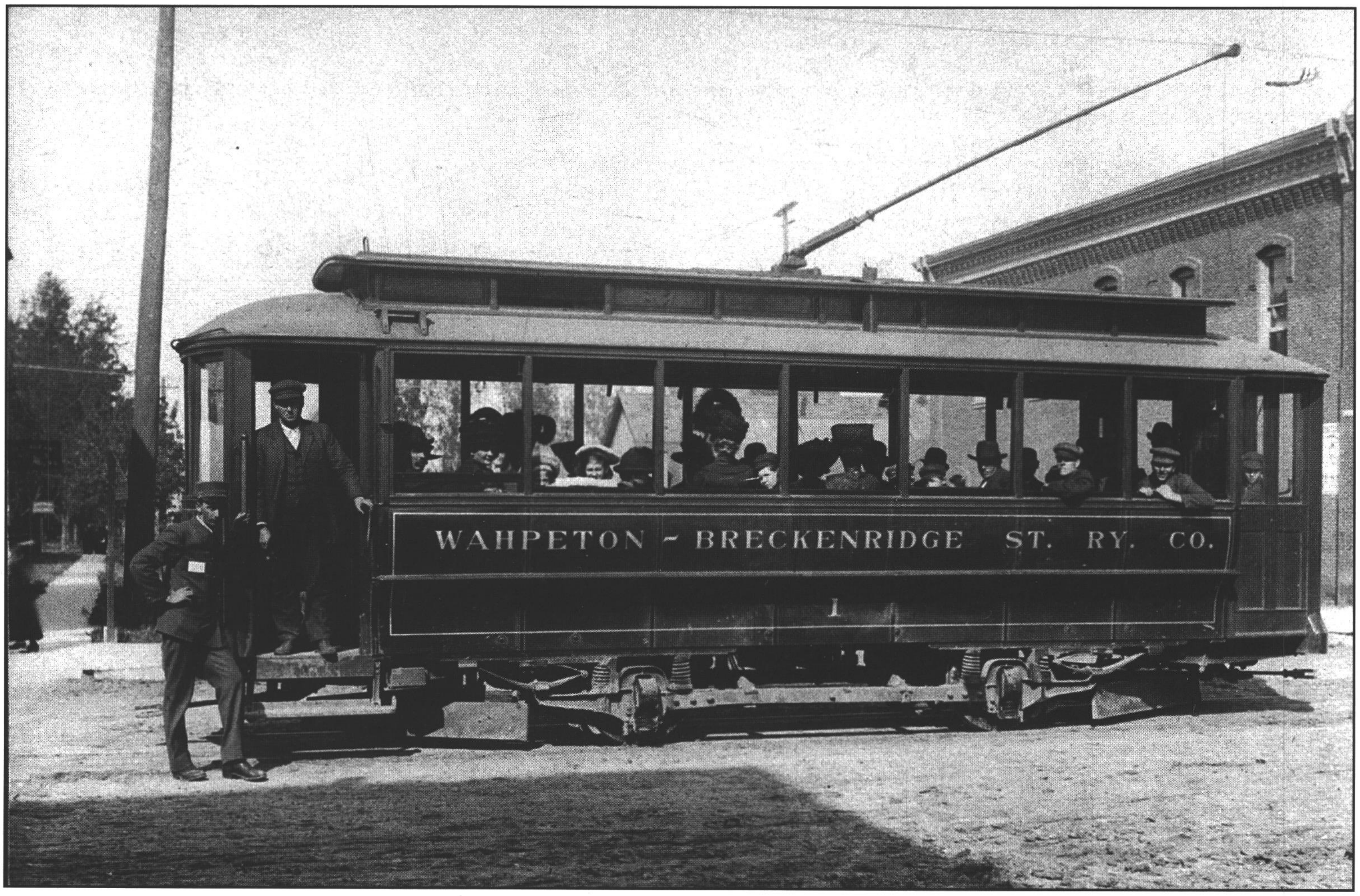
The purpose of this postcard view is to show off #2's new safety fender. The location is in Breckenridge, where Minnesota Avenue ran alongside the Great Northern. Richland County Historical Society collection.

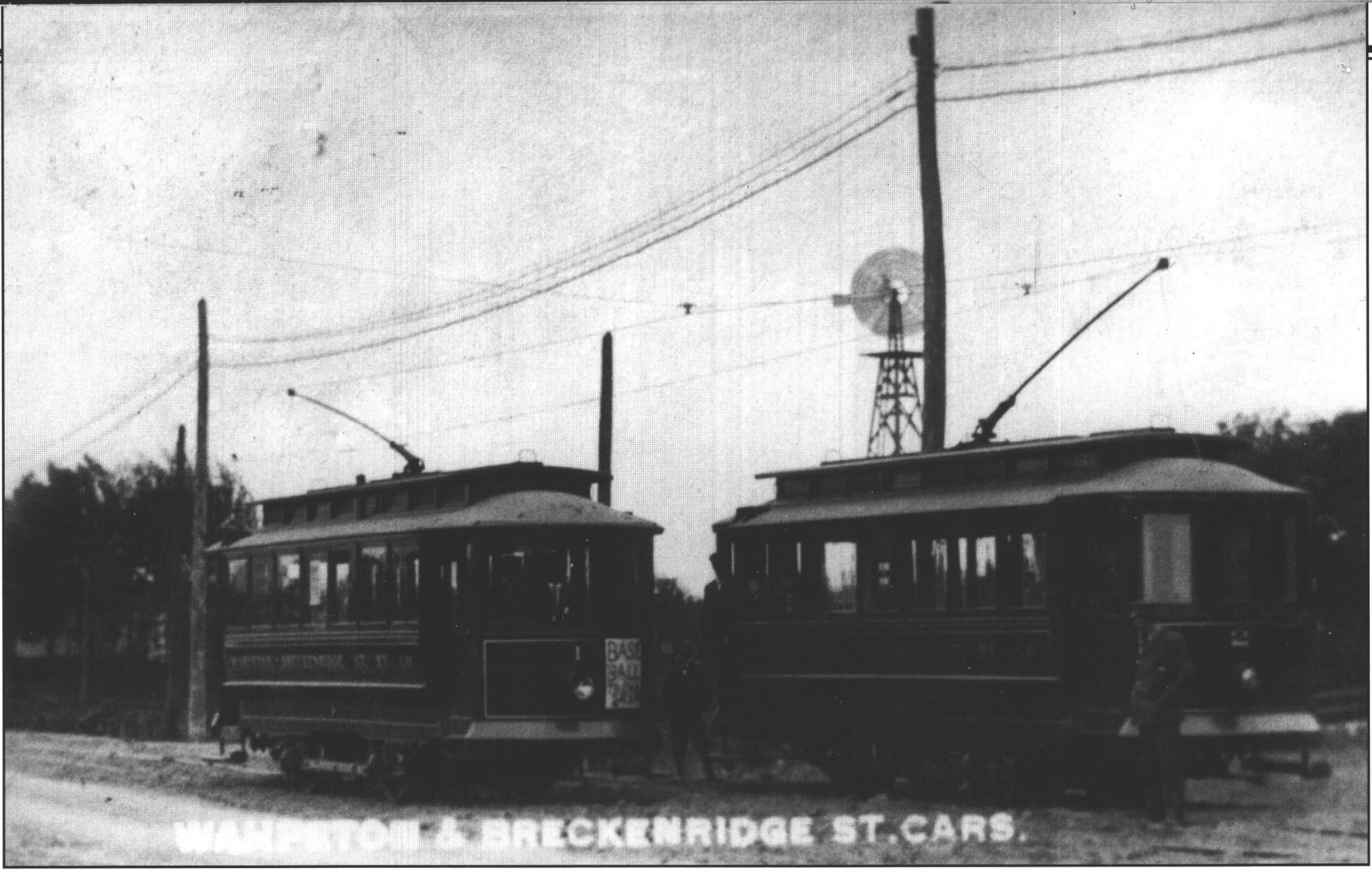
Here's a good comparison of the two cars. Note that the same conductor appears in both. Top: Car #2 in Breckenridge. MTM collection, from Joel Hutchinson.

Bottom: Car #1 in Wahpeton. That appears to be the motorman in the front vestibule, properly holding the detached reverse lever. Richland County Historical Society collection.



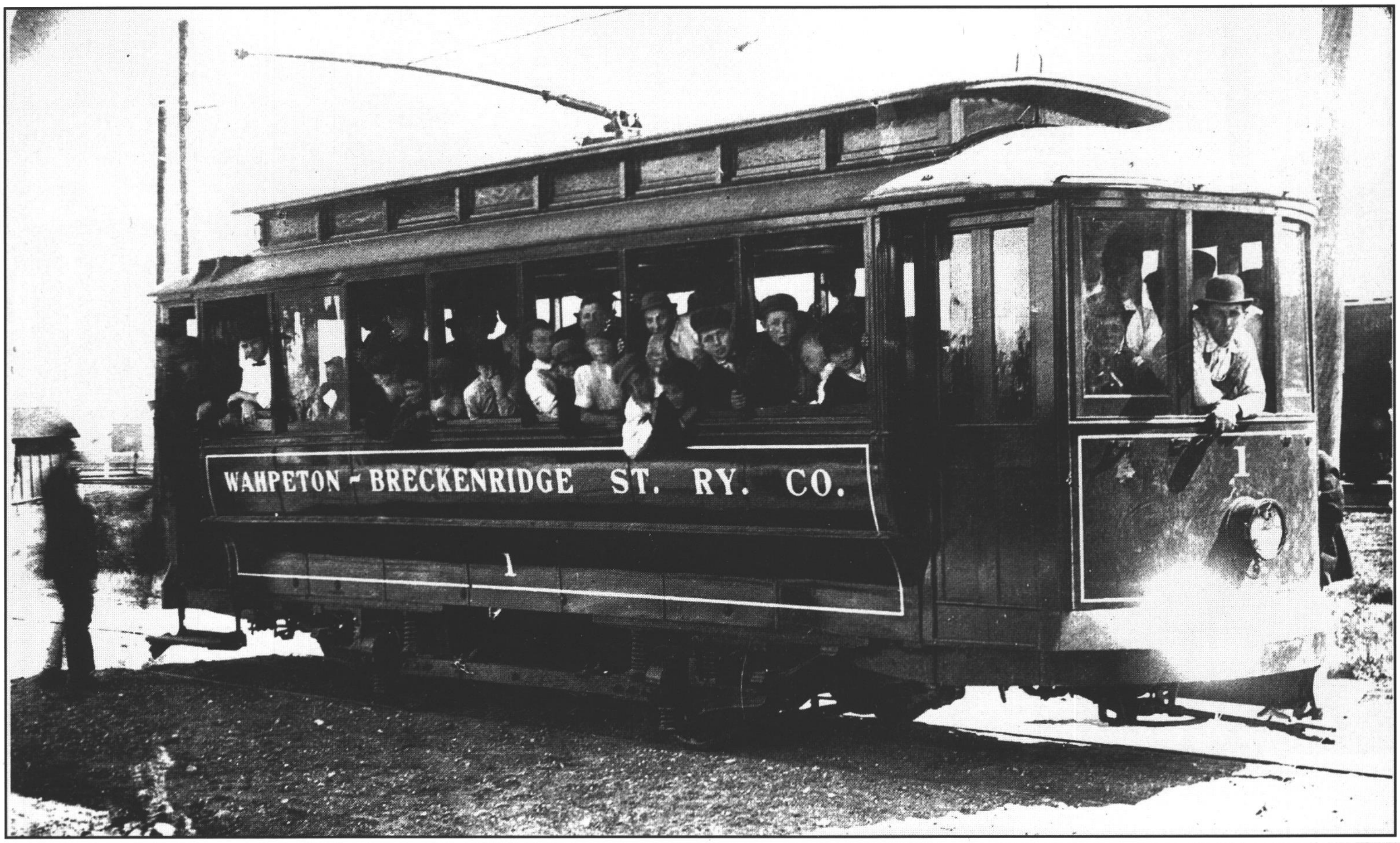

WAHPETON - BRECKENRIDGE ST. RY. CO.
2
HEL

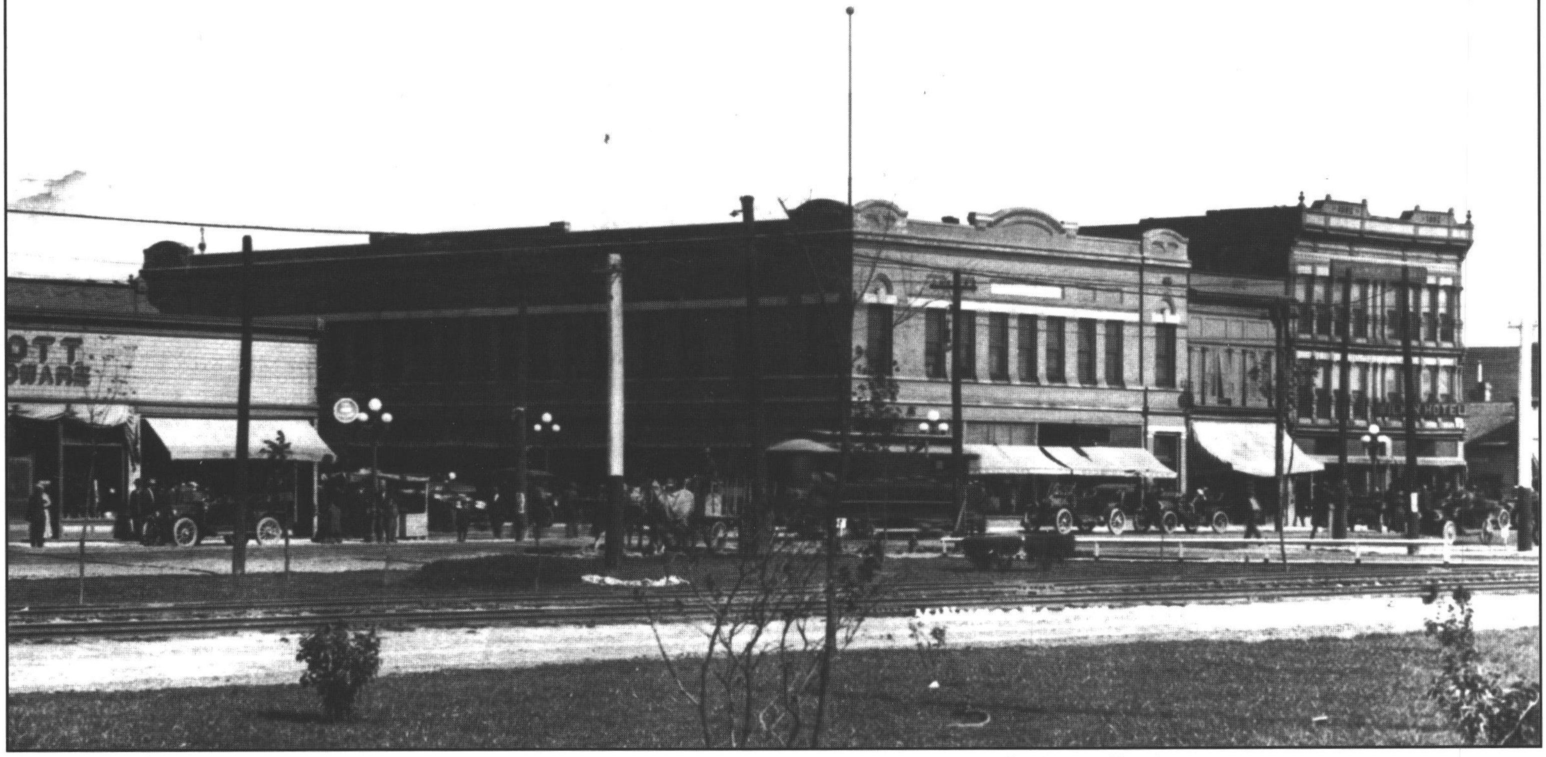

WAHPETON - BRECKENRIDGE ST. RY. CO.
1


WAHPETON & BRECKENRIDGE ST. CARS.
BASE BALL

Both cars are on the line, implying either extra service or two car operation in the early years. The map from Electric Railways of Minnesota doesn't show this passing siding. It appears to be near the river which would make sense, since that was in the middle of the line. Wilkin County Historical Society collection.

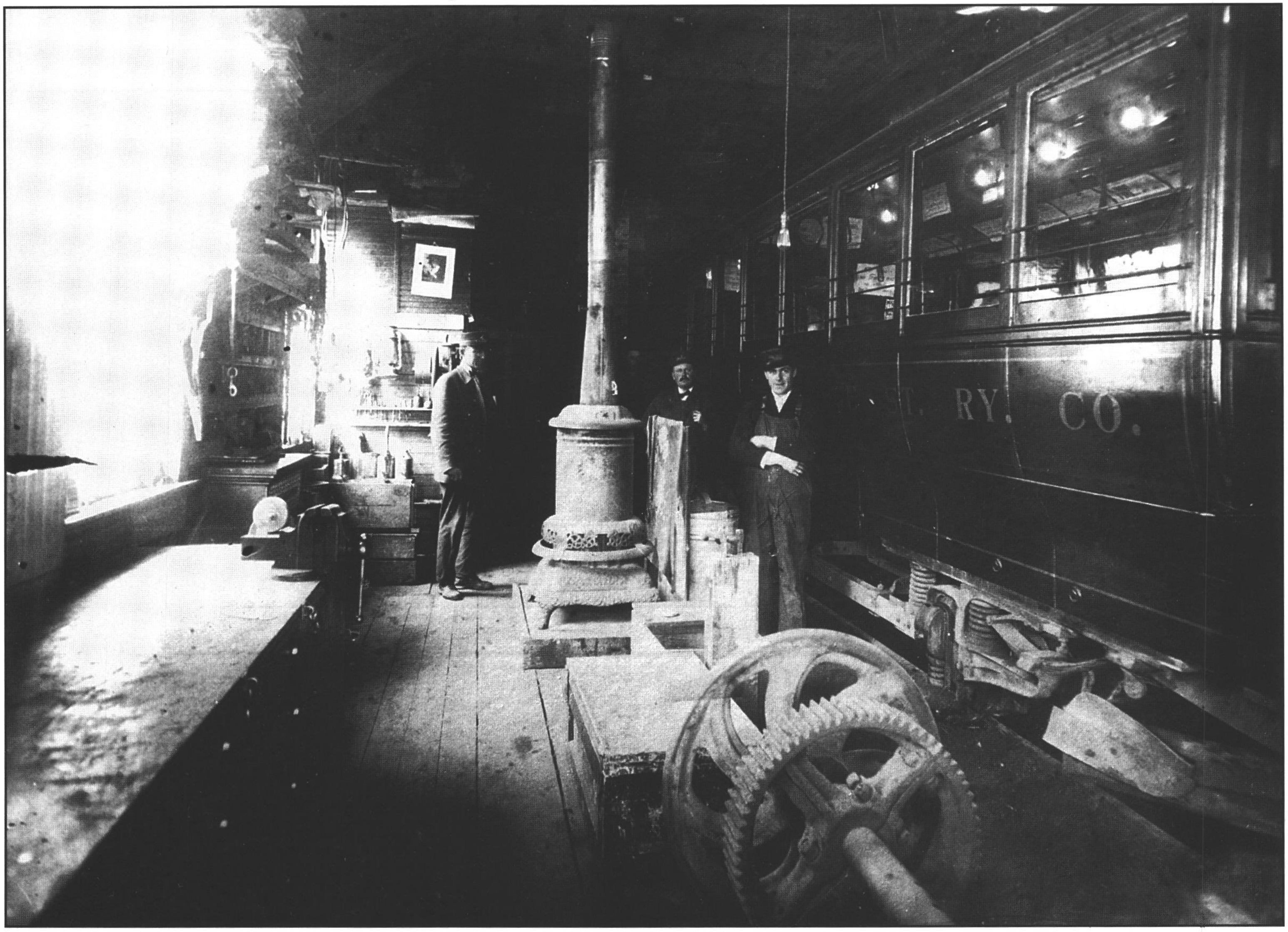
There appear to be at least 40 people on this car, all of them men and boys, so it would seem to be some sort of special group. Wilkin County Historical Society collection.

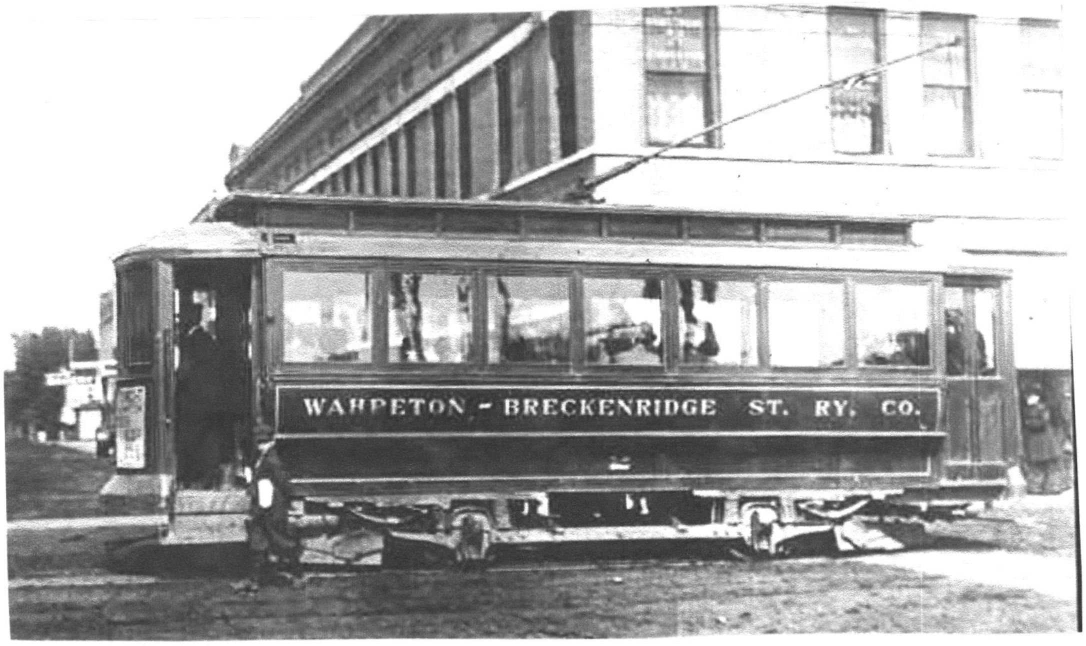

WAHPETON - BRECKENRIDGE ST. RY. CO.
1
1

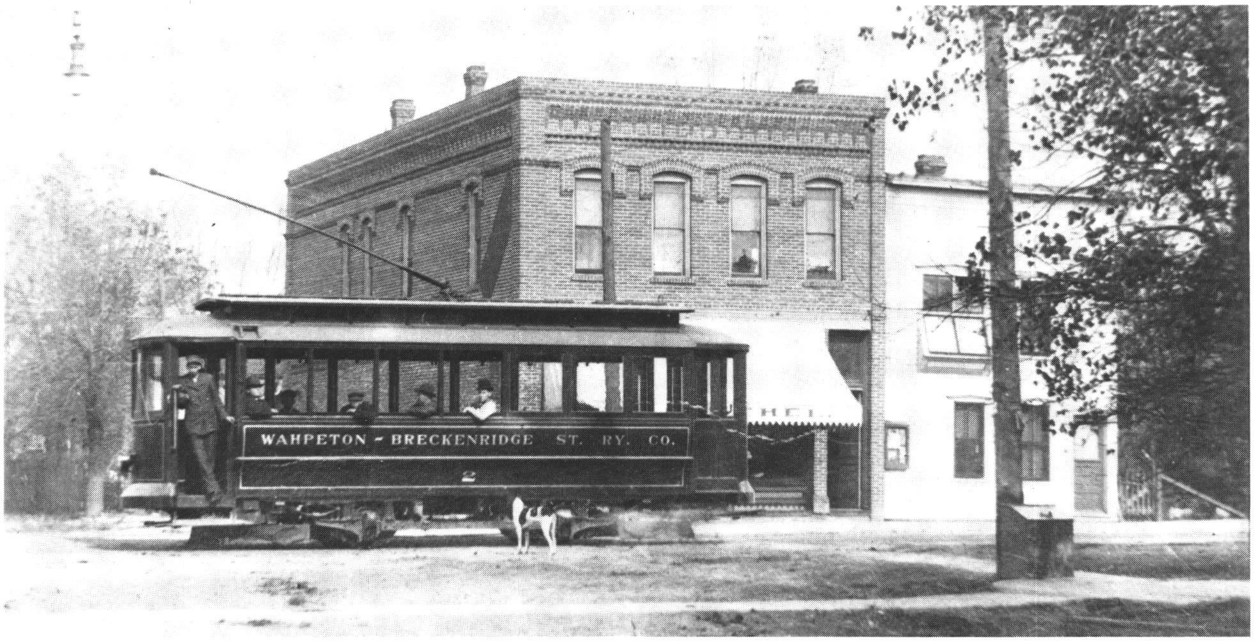


This is a view of the center of downtown Breckenridge about 1915. Wilkin County Historical Society collection.

Inside the small, two track carbarn in Breckenridge. Wilkin County Historical Society collection.



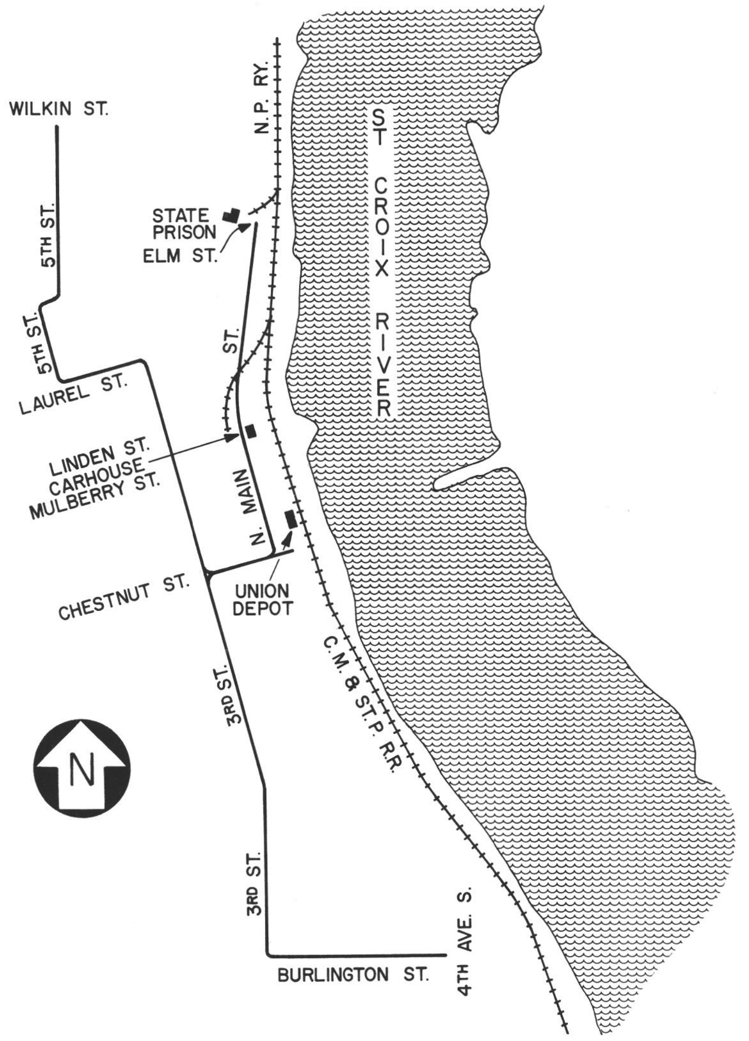

WAHPETON - BRECKENRIDGE ST. RY. CO.


WAHPETON - BRECKENRIDGE ST. RY. CO.
2

Car 2; note the pilots attached to the truck frame which also served as snow plow blades in winter. (Frank Butts collection)

STILLWATER STREET RAILWAY

STILLWATER STREET RAILWAY
STILLWATER ELECTRIC ST. RY.
1889 - 1897


WILKIN ST.
5TH ST.
5TH ST.
LAUREL ST.
STATE PRISON
ELM ST.
N. P. RY.
ST. CROIX RIVER
ST.
LINDEN ST.
CARHOUSE
MULBERRY ST.
N. MAIN
UNION DEPOT
CHESTNUT ST.
3RD ST.
N
C. M. & ST. P. RR.
3RD ST.
BURLINGTON ST.
4TH AVE. S.

STILLWATER STREET RAILWAY

Stillwater

Stillwater was one of the earliest settlements in the state. It was the center of vast logging operations on the St. Croix River and during this period had a population in excess of 10,000 persons. The Stillwater Street Railway was incorporated in May, 1886, by several local businessmen but no construction was undertaken. A new company with the same name was organized in April, 1888, by Dr. E. D. Allen, Davenport, Iowa, as president with W. H. Hewitt as superintendent. During 1889 construction of two lines of electric street railway was begun and completed. Electrical equipment designed by Frank Sprague was used. A trial run was made on June 25, 1889, with regular operation begun June 27th. This was the first electric railway in the state to operate on a consistent and successful basis.

According to a local historian, the two lines ran on the following streets.

1. From the foot of Chestnut St. at the Union Depot, on Chestnut St. to 3rd St., south on 3rd St. to Burlington St., and east on Burlington St. to 4th Ave. S. (Oak St.). This was referred to as the South Stillwater line although the community of that name was situated several miles to the south. Apparently a line to there was planned as a reference was made to the effect that passengers for South Stillwater would change cars at 4th and Burlington to another line running to that community.
2. On N. Main St. from the old state prison south to Chestnut St., on Chestnut St. to 3rd St., north on 3rd St. to Laurel St., west on Laurel St. to 5th St., and north on 5th St. to Wilkin St. Tracks on this line were laid on one side of the street instead of in the center.

The power station and carhouse were located at 319 Main St., between Mulberry St. and Linden St., about where the Consolidated Lumber Co. later located its retail lumber yard. Power station equipment consisted of one 125 h.p. Meyer fixed cut-off engine and two 60 h.p. generators.

Equipment consisted of six 16 ft. (22 ft. overall) closed passenger motor cars, equipped for double end operation, built in St. Louis, Missouri. [redacted] The cars had longitudinal seats with space allowed on one side for a small stove. Five cars were needed to provide service on the two lines operated. A February, 1890, Street Railway Journal directory reported seven cars were owned.

The 1890 U. S. Census reported the following information. First main track 5.25 miles, sidings 0.25 miles, total track 5.50 miles. Five motor cars owned; an average of four cars were operated at one time. Steepest grade: 9.75%, 300 feet long. Radius of sharpest curve: 40 feet.

An 1891 Street Railway Journal directory provided the following information. Five miles of 4'8½" gauge track consisting of 30 lb. T rail and tram rail. Six motor cars were owned equipped with Edison motors. Officers were: W. L. Allen, president; T. O. Swiney, vice-president; E. D. Allen, secretary-treasurer; and J. S. Barrett, superintendent. Offices were located at Davenport, Iowa.

During 1891 the following events were recorded in local trade journals. Many sharp curves were eliminated on the South Stillwater line. The Main St. line was extended to the state prison. New cars with 50 h.p. motors were purchased to improve service on the long, steep grades. Burton electric heaters were experimentally installed on car number 7 with satisfactory results.

The local historian wrote that patronage was not too good at first; horse and buggy competition was extensive and the five cent fare was too expensive for some people. However a good business was done on Sundays and holidays when there were baseball games at the field where the Stillwater Clinic is now located. The company managed to remain solvent until Dr. Allen began using cash to bolster his financially troubled Davenport system. W. H. Hewitt was appointed receiver of the company.

By August, 1893, the company was in its second receivership. Financial problems increased until there was insufficient cash to pay the employees. In the meantime payment of interest on the mortgage bonds had been defaulted. On May 31, 1894, the property was sold by the sheriff under foreclosure proceedings. Allen Curtis, trustee for the Boston bondholders, purchased the property for $69,120.

The Stillwater Electric Street Railway Company [redacted] was incorporated in July, 1894, with capital of $75,000 and took over the property. Officers were: Allen B. Curtis, Boston, president; G. E. Warring, Boston, treasurer; J. C. Nethaway, Stillwater, secretary; and W. M. Hewitt, Stillwater, general superintendent. An office was maintained at 1 Tepass Block, Stillwater. An 1894 Street Railway Journal directory listed eight cars owned equipped with Edison motors.

On March 5, 1897, the property was sold for $4,700 to Fred Flint of Stillwater. He subsequently offered it to the city for $5,000 but soon found that the scrap value of the property was considerably higher. The newspaper reported in April, 1897, that the street railway was to be abandoned and sold for scrap.

STILLWATER ST. RY.
Compiled from Street Railway Journal articles

August 1889: A trial trlip was made June 25th and everything worked in a satisfactory matter.

October 1889: Stillwater St. Ry. has executed a mortgage of its franchise to Allen Curtis of Boston as security for a loan of $60,000.

December 1889: Stillwater St. Ry. on October 30th a test trip was made on the new electric railroad from the Union Depot to South Stillwater and return. Total running time was 34 minutes and there was only the difference of 1/4 minute between the time going and returning. Some of the stretches showed fast time.

STILLWATER ELECTRIC STREET RAILWAY
Compiled from Minneapolis Tribune Articles

6-21-1889: Mr. Hewitt, manager, says cars will be started next Monday; the first trips being trials to test the working of the apparatus.

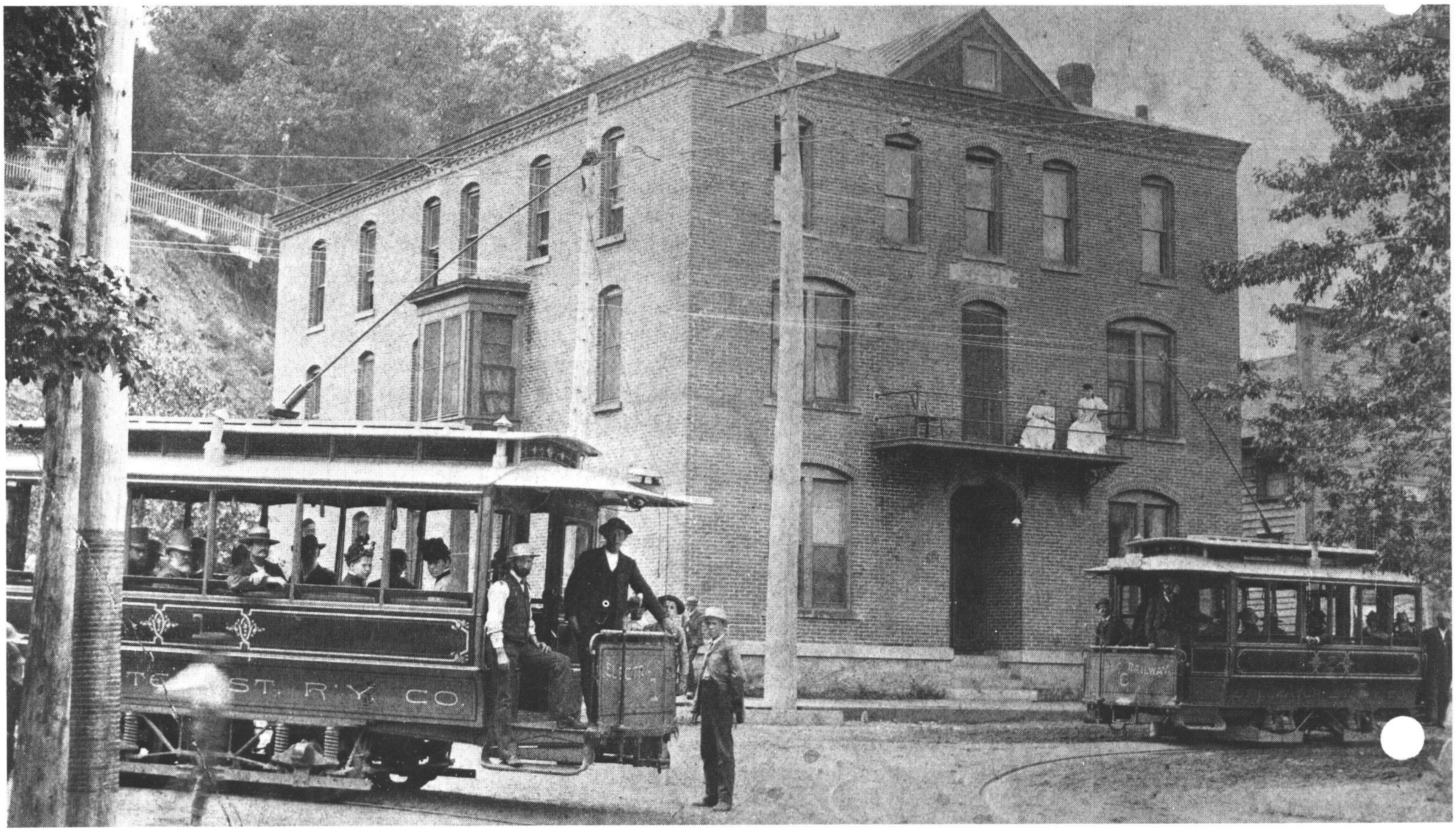
7-10-1889: A rain storm washed out track on Chestnut near Pine, causing total cessation of streetcar travel.

9-3-1889: A switch is being organized on the corner of 3rd and Chestnut Streets enabling passengers to make the trip from one hill to the other without change of cars.

11-24-1896: A district court judge ordered Receiver Hewitt to shut down the street railway at noon today. (Not a wheel was turning 11-25-1896.) It was impossible to affect a sale of the property whereby enough would be realized to the Receiver's indebtedness of $6,100. Sale adjourned until December 8th.

4-8-1897: The work of taking down the wires by Flint & Scott began Tuesday morning, but when they began tearing up the ground wires today the chief of police was ordered to stop them because of an ordinance preventing anyone from disturbing the streets. An injunction was served on them this afternoon preventing them from tearing up the tracks.

8-22-1897: The injunction obtained by the city restraining Flint & Scott from taking up the street railway tracks was dissolved 8-21 by the judge and the owners permitted to proceed.



Stillwater St. Ry. cars 1 and 6 meet at the wye on 3rd and Chestnut Streets during 1893. (W. C. Fisher; John Runk collection from Joe Hutchinson)

TESTED IN STILLWATER
Special Telegram to the Tribune
Minneapolis Tribune (1867-1908); Jul 28, 1897;
ProQuest Historical Newspapers Minneapolis Tribune (1867-1922)
pg. 1

TESTED IN STILLWATER.

A New System of Electric Street Cars, Which May Revolutionize Present Methods.

Special Telegram to the Tribune.

STILLWATER, Minn., July 27.—W. H. Patton, the inventor of the Patton system of electric street cars, arrived from Chicago yesterday and an experiment was made with the car this morning. The car is a trifle bulkier than those operated with overhead and ground wires, and makes a little more noise: but if the trial trip this morning is an indication of what the car can do, it is fair to presume that it will in time revolutionize electric street railway matters. The car is equipped with storage batteries and in the center is a small engine room where electricity is generated by means of a gasoline engine. The engine and car can be started simultaneously, and after sufficient electricity has been generated the car can be operated without the use of the engine. Mr. Patton says the car will run for hours after the batteries have been charged. It is about 24 feet long and weighs nearly 10 tons.

At first it was intended to use it on the Stillwater street railway tracks, but the trucks will not fit the tracks and the wheels require a "T" rail, instead of the flat rails that have been in use here. A large number of prominent citizens and newspaper representatives made the trial run to South Stillwater and back, and the car made the trip at the rate of 12 miles per hour, including necessary stops. All were delighted with the trip, and other residents of Stillwater will be given a chance to see what the car can do during the week. An experienced electrician has been placed in charge of it and regular trips up and down the transfer company and Milwaukee tracks will be made until Saturday. It is estimated that the cost of fuel is less than 1 cent per hour, and that of itself is an important item.

The car is the only one of its kind, and was built at Racine, Wis. At present the gasoline engine makes considerable noise, but Mr. Patton says that new engines are being built which are practically noiseless. People here are greatly interested in the venture, and thousands have watched the car on its trips.

St Ry Gazette August 1889
H R Hewitt has disposed of
his 1/3 interest to E. D. Allen
of Davenport, Iowa. Owners
are now: Dr. W. L. Allen Pres
T.O. Swiney VP
E.D. Allen, Sec & Treas

The Stillwater Union Depot and Transfer Co. Main line, 5.50 miles; branches, 2 miles; gauge, 4 ft. 8½ in.; rail, 35 lbs.; cars, 7. Operated by Sprague system of electricity. W. L. Allen, *Pres.;* T. O. Swiney, *Vice-Pres.;* E. D. Allen, *Sec. & Treas.;* J. J. Stinson, *Supt.* GENERAL OFFICE, Stillwater, Minn.

Union Depot Street Ry. and Transfer Co. Main line, 5.5 miles; gauge, 4 ft. 8½ in.; rail, 55 lbs. Geo. M. Brush, *Receiver.* GENERAL OFFICE, Stillwater, Minn.

App 1890

Stillwater Electric Railway.

The Stillwater Electric Street Railway went into operation on the 27th ult. This is an entirely new line, there being no street railway in Stillwater previous to this. Any one visiting that city will understand the reason at a glance. Owing to the grades it would have been an absolutely impossibility to have made a horse railway pay, and only the introduction of electricity has made the economical operation of a street car line possible.

The line is five and one-fourth miles long, and is at present running six 16 foot cars equipped with Sprague motors.

The generating plant consists of two 60 horse power generators and a 125 horse power Meyer Fixed cut off engine.

The barn and power house are located on the same lot, and the general arrangement of the barn floor is of the latest form for electric railway purposes, having pits under all the track room in the barn.

On the South Hill branch of the line running between Stillwater and South Stillwater, immediately on leaving the Stillwater terminus, the line suddenly ascends some 250 feet within three-fourths of a mile, one part rising 210 feet in 2,400 feet. At the South Stillwater end there is a similar declivity, only a little more gradual.

The cars ascend the steepest grade, pulling a trail car at a speed of from five to seven miles an hour with ease. It is unnecessary to say that the people of Stillwater feel very proud to think they have the first successful electric railway system in Minnesota, and a line equipped with cars superior in finish to any operated in any of the largest cities of the state. They show their appreciation of the efforts the officers of the road have put forth by their liberal patronage of the cars.

ST. RY. GAZETTE JULY 1889

SRG APRIL 1889

Stillwater—The contract with the Stillwater Construction and Furnishing company for the erection of the Electric Street Railway company's combined car stables and power house, has been closed. The building will have a Main street frontage of thirty feet, with a depth of 160 feet. It will be of frame, one story high, with the sides and roof cased with corrugated iron, and an ornamental brick-veneered front, having at the north side a ten-foot car door with segment head, and at the south side a double window and office entrance. The main room, 30x85 feet, will afford storage for nine cars. Back of this is the dynamo or power room, 30x45 feet, finished tastefully in oiled yellow pine. Leading from the dynamo room is the boiler room, 30x30 feet, and attached to the rear of the main building, is a coal house of 200 tons capacity. The building, exclusive of tracks for the car stable and machinery, will cost $3,000, and is to be completed ready for occupancy by April 20. Its south wall will stand just thirty feet north of the construction company's building on the east side of Main street, and on account of the character of the ground, it will be necessary to drive piling in order to obtain a secure foundation.

Mpls Tribune 4-1-1892

STILLWATER SUNDRIES.

Another Receiver Wanted for the Car Company—Poverty Causes Theft.

STILLWATER, Minn., March 31.—[Special.]—Application will be made at the next special term of the district court, April 11, for another receiver for the Stillwater Street Railway Company in place of W. M. Hewitt, who was appointed receiver at the request of the bondholders. The motion will be made by Searles & Gail, attorneys for the St. Louis Car Manufacturing Company, who hold a judgment against the Street Railway Company of $925 for rolling stock, and who claim that the present arrangement debars other creditors. 2ND RECEIVER: W.C. MASTERMAN

AVERY® POLY-VU

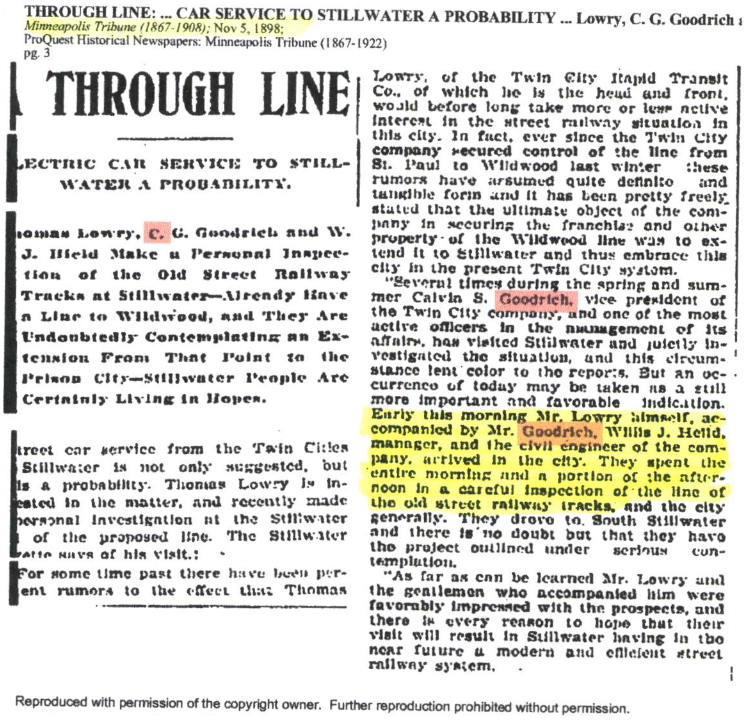
Stillwater St Ry
Street Railway Review

Sold 5-6-1894 to Allen Curtiss, trustee for bondholders $69,334. Mortgage was $69,000; had gotten a default judgment for $67,709.

Stillwater Electric St. Ry.

Inc. July 1894 capital stock $75,000

Pres.	Allen Curtiss	Boston
V.Pres	E.P. Motley	Boston
Treas.	George E. Warring	Boston
Sec.	J.C. Nethaway	Stillwater



THROUGH LINE: ... CAR SERVICE TO STILLWATER A PROBABILITY ... Lowry, C. G. Goodrich
Minneapolis Tribune (1867-1908); Nov 5, 1898;
ProQuest Historical Newspapers: Minneapolis Tribune (1867-1922)
pg. 3

THROUGH LINE

LECTRIC CAR SERVICE TO STILL-WATER A PROBABILITY.

homas Lowry, C. G. Goodrich and W. J. Hield Make a Personal Inspection of the Old Street Railway Tracks at Stillwater—Already Have a Line to Wildwood, and They Are Undoubtedly Contemplating an Extension From That Point to the Prison City—Stillwater People Are Certainly Living in Hopes.

treet car service from the Twin Cities Stillwater is not only suggested, but is a probability. Thomas Lowry is inested in the matter, and recently made ersonal investigation at the Stillwater of the proposed line. The Stillwater ette says of his visit.:

For some time past there have been perent rumors to the effect that Thomas Lowry, of the Twin City Rapid Transit Co., of which he is the head and front, would before long take more or less active interest in the street railway situation in this city. In fact, ever since the Twin City company secured control of the line from St. Paul to Wildwood last winter these rumors have assumed quite definite and tangible form and it has been pretty freely stated that the ultimate object of the company in securing the franchise and other property of the Wildwood line was to extend it to Stillwater and thus embrace this city in the present Twin City system.

"Several times during the spring and summer Calvin S. Goodrich, vice president of the Twin City company, and one of the most active officers in the management of its affairs, has visited Stillwater and quietly investigated the situation, and this circumstance lent color to the reports. But an occurrence of today may be taken as a still more important and favorable indication. Early this morning Mr. Lowry himself, accompanied by Mr. Goodrich, Willis J. Heild, manager, and the civil engineer of the company, arrived in the city. They spent the entire morning and a portion of the afternoon in a careful inspection of the line of the old street railway tracks, and the city generally. They drove to South Stillwater and there is no doubt but that they have the project outlined under serious contemplation.

"As far as can be learned Mr. Lowry and the gentlemen who accompanied him were favorably impressed with the prospects, and there is every reason to hope that their visit will result in Stillwater having in the near future a modern and efficient street railway system.

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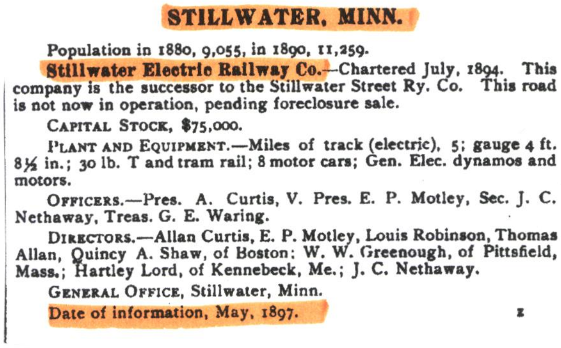


STILLWATER, MINN.

Population in 1880, 9,055, in 1890, 11,259.

Stillwater Electric Railway Co.—Chartered July, 1894. This company is the successor to the Stillwater Street Ry. Co. This road is not now in operation, pending foreclosure sale.

CAPITAL STOCK, $75,000.

PLANT AND EQUIPMENT.—Miles of track (electric), 5; gauge 4 ft. 8½ in.; 30 lb. T and tram rail; 8 motor cars; Gen. Elec. dynamos and motors.

OFFICERS.—Pres. A. Curtis, V. Pres. E. P. Motley, Sec. J. C. Nethaway, Treas. G. E. Waring.

DIRECTORS.—Allan Curtis, E. P. Motley, Louis Robinson, Thomas Allan, Quincy A. Shaw, of Boston; W. W. Greenough, of Pittsfield, Mass.; Hartley Lord, of Kennebeck, Me.; J. C. Nethaway.

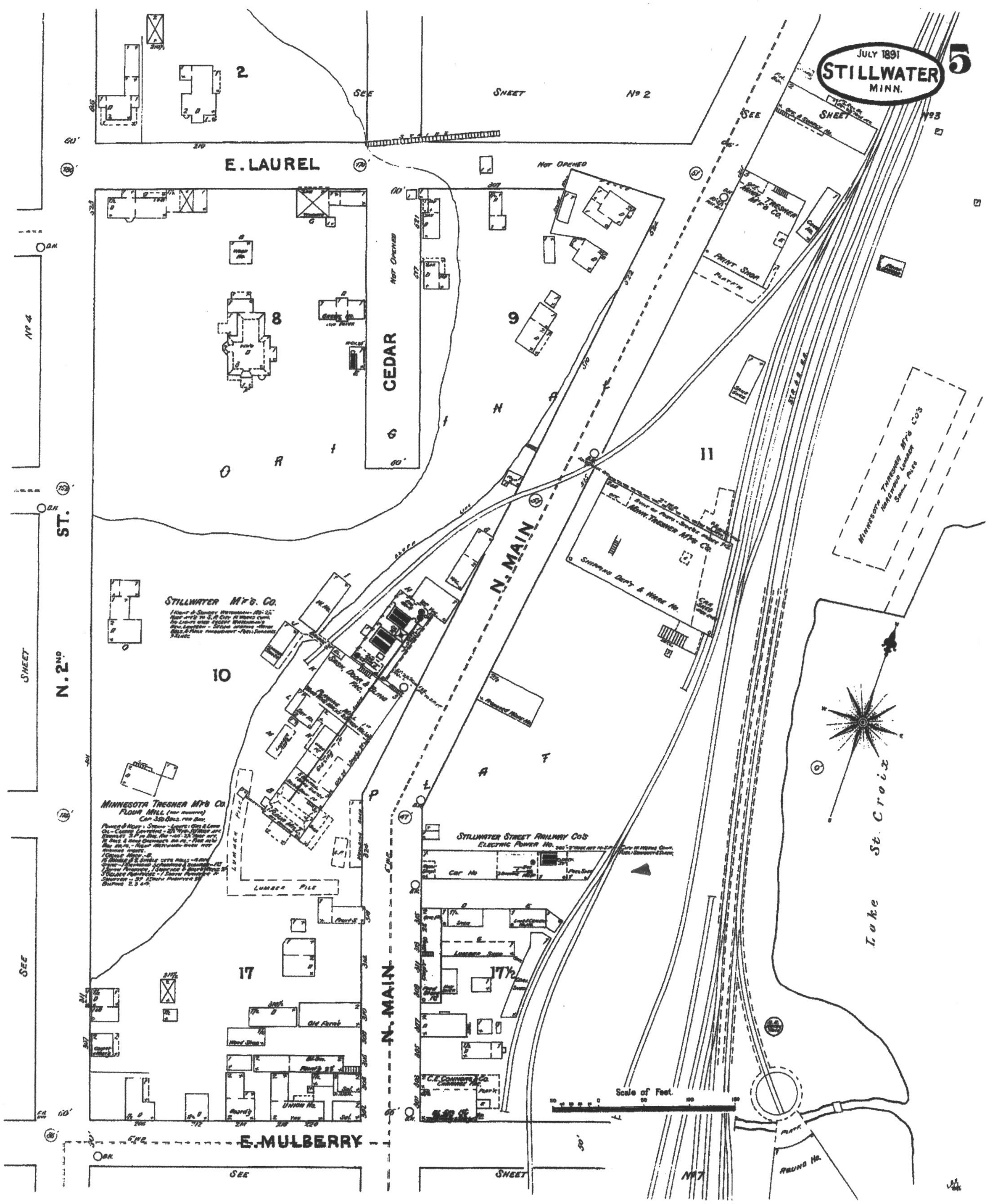
GENERAL OFFICE, Stillwater, Minn.

Date of information, May, 1897.

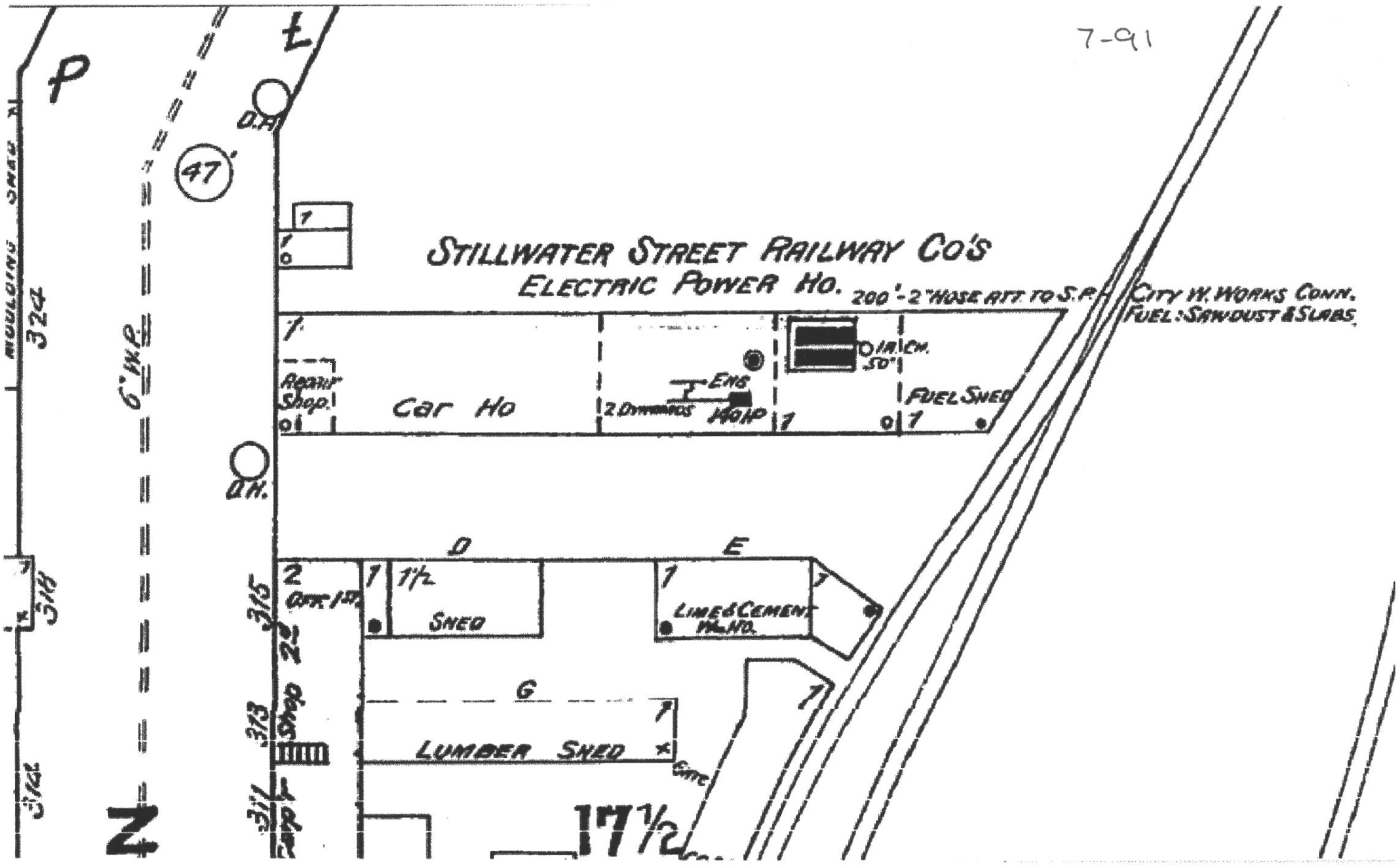
z

6-15-1899 TCRT
purchased the
powerhouse building
for use as a power-
house and repair shop

American Street Railway Investments
Stillwater Electric Street Railway
Road has been sold; rails and
part of equipment have been removed.
Feb 1898


JULY 1891
STILLWATER
MINN.
5
SEE SHEET Nº 2
SEE SHEET Nº 3
SEE SHEET Nº 4
SEE SHEET Nº 7
E. LAUREL
NOT OPENED
CEDAR
NOT OPENED
N. 2ND ST.
N. MAIN
E. MULBERRY
2
8
9
10
11
17
17½
ORIGINAL
PLAT
MINN. THRESHER MF'G CO.
PAINT SHOP
MINN. THRESHER MF'G CO.
SHIPPING DEP'T & WARE HO.
MINNESOTA THRESHER MF'G CO'S HARDWOOD LUMBER SAWED POLES
STILLWATER MF'G CO.
SASH, DOOR & BLIND FAC.
MINNESOTA TRESHER MF'G CO. FLOUR MILL (NOT RUNNING) CAP. 350 BBLS. PER DAY.
FLOUR MILL
LUMBER PILE
STILLWATER STREET RAILWAY CO'S ELECTRIC POWER HO.
CAR HO.
LUMBER SHED
OLD FOUND.
WOOD SHED
UNION HO.
C.E. CONNORS & CO.
ROUND HO.
Lake St. Croix
Scale of Feet.
50
0
50
100
150

7-91


P
47
O.H.
MOULDING SHED
324
6" W.P.
STILLWATER STREET RAILWAY CO'S
ELECTRIC POWER HO.
200'-2" HOSE ATT. TO S.P.
CITY W. WORKS CONN.
FUEL: SAWDUST & SLABS
Repair Shop
Car Ho
2 DYNAMOS
ENG
40 H.P.
1 IR. CH. 50'
FUEL SHED
O.H.
D
E
2 OFF. 1st
1½ SHED
LIME & CEMENT WA. HO.
G
LUMBER SHED
315
313
311
314
312
17½
N

26. Stillwater Street Railway Co. electric power house, 319 N. Main (ca. 1890-ca. 1910)

1985

Historical Overview: This 1-story frame building sat one door south of Site #23, and was metal clad. It had no basement. The front had a small repair shop and car house. The rear held 2 engines, 2 boilers, and a fuel shed (Sanborn 1891).

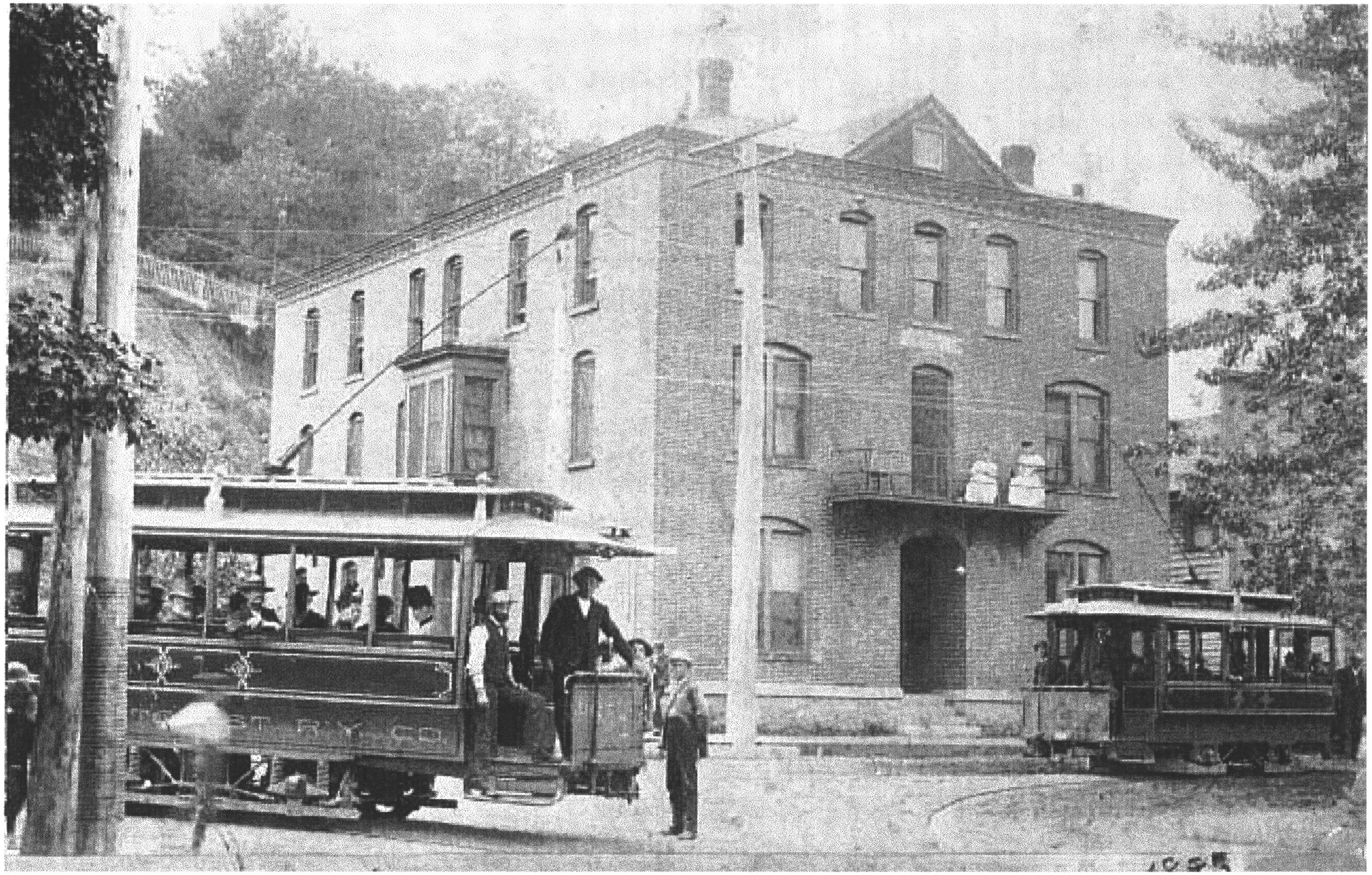
The Stillwater Street Railway Co. was a financial flop. The venture went into receivership and the tracks were torn up in 1897. The assets of the company were sold for junk (Roney 1970: 19).

J.N. Bronson bought the building for a foundry and machine shop, which operated there until around 1910, when the building was razed.

Archaeological Potential: None. The building had no basement and only stood for a few years.

Recommendations: No further work is necessary.

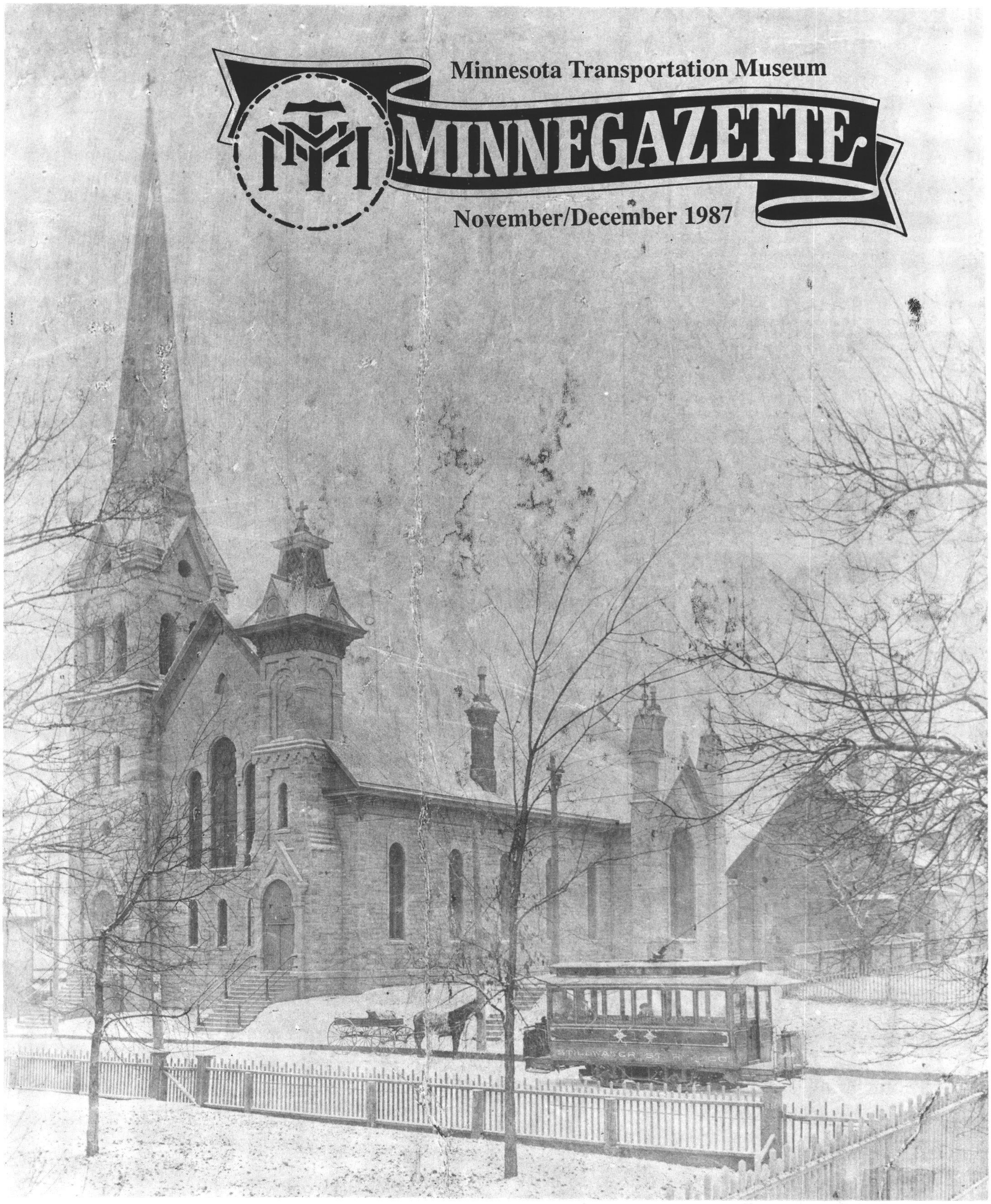
References: Sanborn (1904); Roney (1970:19).


ST. RY. CO.

Minnesota Transportation Museum

MINNEGAZETTE

November/December 1987


STILLWATER ST

CONSTRUCTION AND EQUIPMENT NOTES.

The Burton Electric Heater.

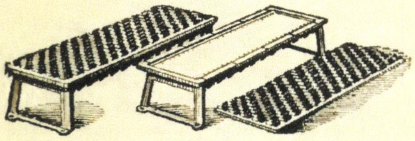


Fig. 1.

SCARCELY any improvement that has come to street railway service has had to battle with more general objection than that of heating cars. The public immediately pronounced the delay as due entirely to an impecuniousness on the part of companies. This, however, was not the reason, as few managers can be found who will not frankly admit the increased travel to be credited to the heater. Street cars and car houses are peculiarly inflammable in their construction and the history of street car fires is that but little, if any, of the rolling stock is ever rescued. Hence, managers have been very reluctant until the improved heaters of the past few years appeared, to put into their cars a hard coal fire, lest some careless employe should imperil a costly property. It has been conceded that for electric lines, an electric heater was the ideal method, and while it is generally understood that cars can be heated by this method, it has also been considered rather a possibility than an economical and practicable undertaking. This problem, like many others, once thought impossible, has now been fully worked out. The history of this invention, in many respects remarkable, chronicles some marked triumphs, not unhampered, it is true, by the usual suspicion with which a new departure is regarded. For some years Dr. Burton has devoted much attention to electrical science, and had carried on a long series of experiments with electric heaters. Beginning with the well known fact that the heat generated in a conductor is proportional to the resistance of such conductor and the strength of current used, the problem was to devise some arrangement whereby the wires when given current, such as would heat them to a requisite intensity, would yet be in danger of fusing. After much experiment, it was discovered that the platinum or any wire or refractory material, even when of considerable length, if surrounded by finely powdered fire clay or similar substance, will, without danger of fusing, carry an electric current of such strength as would instantly destroy it if not thus surrounded. In this way, the entire surface of the wire might be covered by the material which, although able to communicate the heat to the surrounding atmosphere, is of such high electrical resistance that it will not carry off a sufficiently large portion of current to prevent its efficient action as a heat producer.

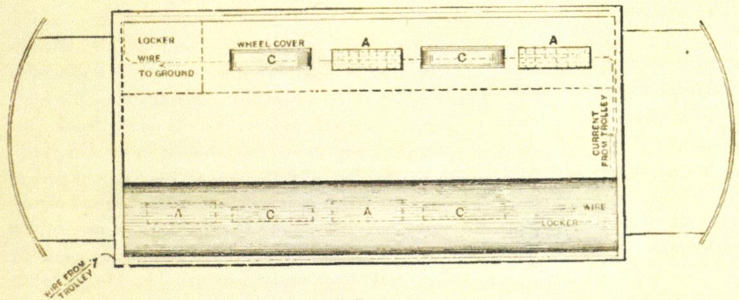


Fig. 2.

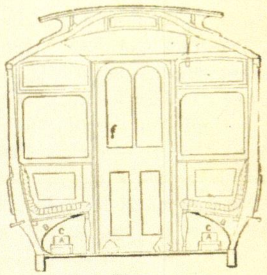


Fig. 3.

The patent was granted to Dr. Burton upon the practical application of his invention in 1887, and some time later he secured another patent on an improved method of electrically connecting the heaters. Up to the present time, however, its use has been confined to electric cars. The apparatus used in street car work and the method of wiring, will be readily understood by reference to the accompanying diagram. Figure 1 shows the iron casing with a corrugated covering to facilitate the radiation of the heat, which contains the German silver wire stretched back and forth across the case, and embedded in the fire clay. In wiring the ordinary street car, two such heaters are usually placed on each side under the seats, as shown in figures 2 and 3. The wiring is very easily done. Connection is made to the trolley wire in one corner of the car, and the current conveyed through the heaters under one seat and carried to the other side to a ground connection on the truck. The method of wiring adopted by the company is shown in figure 4, and for street car service, the electrical resistance of the heaters is so adjusted that on a 450 volt circuit they use three amperes of current. When, therefore, the handle of the switch "A" is turned on "L" ("shunt" from line connection) and "B" closed, the heaters are thrown in series of two for a short time, only causing the use of six amperes of current in each set. When a sufficiently high temperature has been attained in these, which will be in fifteen or twenty minutes, the handle "A" is turned on "C" (ground connection), and "B" opened. This causes them to be thrown in series of four, when the heat will be maintained in them for a long time without being appreciably lowered, with the use of only three amperes of current.

The process of warming the cars is supposed to take place in the morning before the car leaves the shed, when there is no other use for the current. The normal use of the current, however, being only three amperes, the cost should be calculated on that basis. As far as regards expense, it is claimed that it is fully as economical and even more so when service and contingent expenses are considered, than the ordinary coal stove. Lieut. S. Dana Greene, the well known electrician, and who is consulting electrician for the Burton Company, estimates the cost to amount to less than 10 cents per day for each car, and in some cases, this estimate has been found too great. The company are constantly in receipt of testimonials from various roads speaking of the heater in the highest terms as regards safety, comfort and economy. The patrons of the road using the heater are even more enthusiastic than the officials.

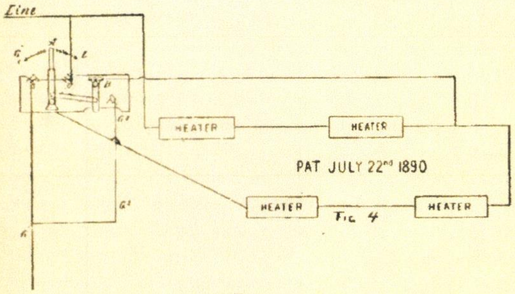


Fig. 4

Other uses for the heater are innumerable and suggest themselves at once. With its almost ideal qualifications, its general application is warmly urged by those familiar with its operation, and when once before the public, there can be no doubt of its rapid sale.

The John Scott legacy medal has been awarded the inventor for his electric heater, on the recommendation of the Franklin Institute, of Philadelphia. The heaters are manufactured by the Burton Electric Company, Richmond, Va., for whom the Electric Merchandise Company of Chicago are selling agents.

Passengers are not calling for heated cars at present, but this is none too early to take up the question.

◆

SUPPOSED OC WAS SELLING PAPERS.

A GOOD one is told on a young gentlemen of Chicago who has been prominently connected with one of the leading electric supply houses, who not long ago changed his occupation to take a good position on one of the electrical journals of this city. His little 6 year old sister claimed the brother as her special property, and listened with profound interest to his announcement, that he was going to be a newspaper man, but did not seem to look upon the change with any special degree of favor.

On the first day of his journalistic work, a visitor at his home noted the far away and almost sad expression on the face of the little miss, who was usually the life of the household. At last the clock struck the hour of three, when she drew a long sigh, and with a voice so full of sympathy as to attract the attention of all, remarked, "Poor Oc, he's out on the streets selling papers now."

A Railway Sprinkler.

THE opening of the new Inter Urban Line between St. Paul and Minneapolis, has discovered the fact that outside the cities and while traversing some 6 miles or more of the distance which is beyond the pale of the water mains, that on certain favorable days the dust is found to be a no small and decidedly unpleasant feature of an otherwise delightful ride. To remedy this evil there is almost finished at the shops of the Minneapolis City Railway, a giant tank, made of ⅛ inch boiler iron, and mounted on a flat car carried on four 36 inch wheels. A piece of four inch steam pipe capped at each end, and suitably perforated with small drill holes, rests across the rear platform. The connecting pipes of the same diameter as the cross pipe, connect it with the tank and insure a bountiful supply of water. It is intended to draw the tank car behind a motor car and by making a trip every two hours, the entire length of the line will be sprinkled in a round trip of eighty minutes. The tank is closed except for a manhole in the top which has a suitable cover, the entire tank car is strongly built and from a little distance resembles the tender of a locomotive. It will be handsomely painted, and will combine novelty and utility as well as serving a useful purpose.

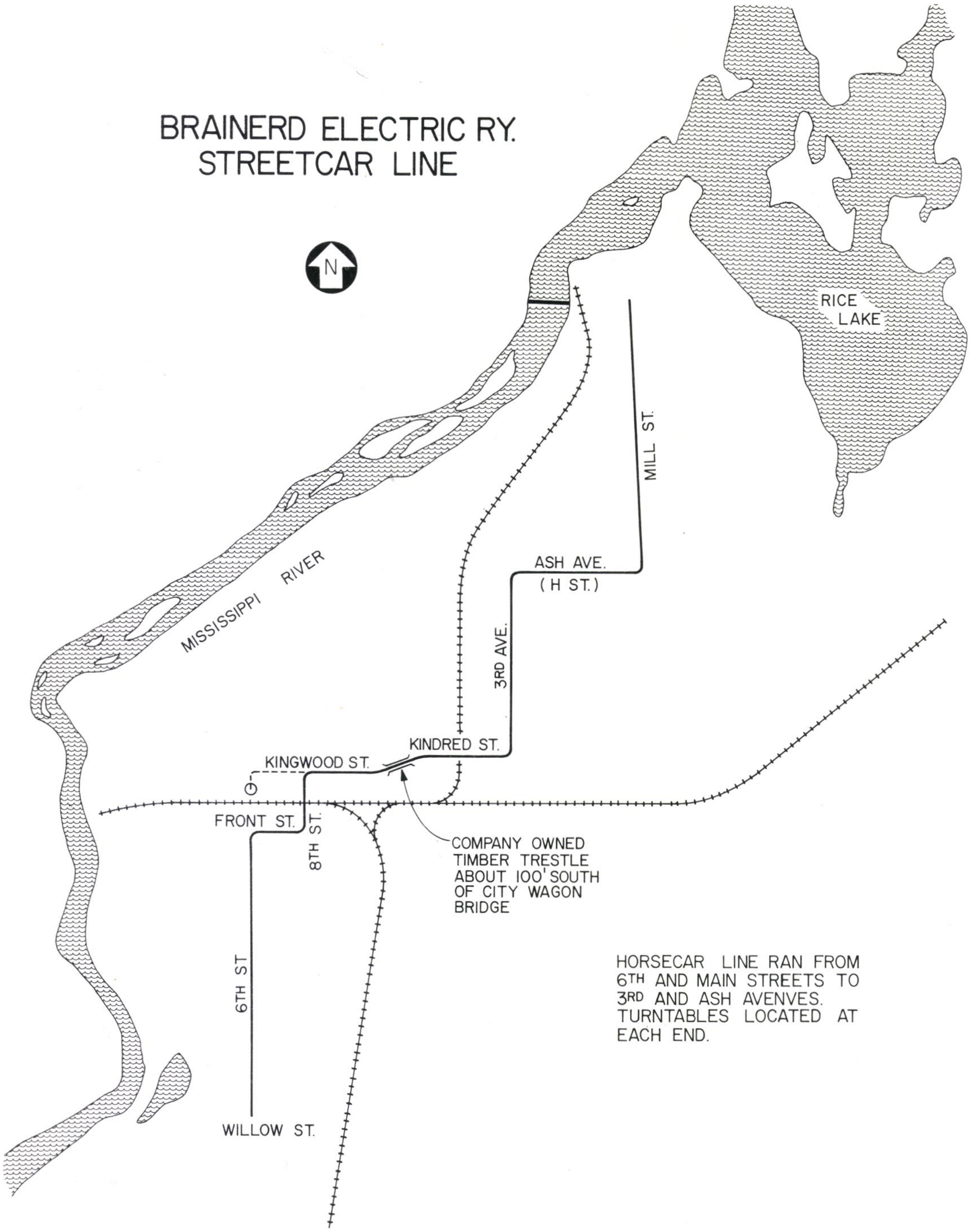
◆

DIRECTLY opposite the office of the STREET RAILWAY REVIEW, the roof is being placed on a magnificent building sixteen stories in height. We passed along the sidewalk the other day, with D. G. Hamilton, of this city, the president of the Pacific Railway Company, which owns five of the street car lines in St. Louis. After looking up at the sky-scraper a minute, he said: "The site on which that building stands was my homestead, and where I lived for twenty-three years. It was then in the outlying residence district, and we had a large front yard shaded by trees, and here on what is now Dearborn street, with its car line, and filled with teams and pedestrians, we had our garden, with currants and strawberries, and rows of cherry trees and sweet corn, and a nice melon patch." Mr. Hamilton is not yet 50 years of age, but the spot is surrounded by ten and twelve story buildings, while immense business houses extend for two miles beyond. Although he has an elegant residence on the boulevard, fully three miles from his old home, the solidly built residence district extends five miles beyond that. And it must not be forgotten that the city's growth has been equally as great on both West and North sides. On the same street and less than two blocks from the office of this paper are now building an office building eighteen stories high, and directly opposite an hotel which will have some of its choicest suites on the twentieth floor.

THE largest verdict ever returned in New York State for an injury of the kind, was recently affirmed by the State Supreme Court, wherein $25,000 was awarded a child for the loss of a leg. The child was less than 4 years of age at the time of the accident, and was playing in the street. It is claimed the driver of the car had his horses on a gallop and was looking the other way.

BRAINERD ELECTRIC STREET RAILWAY

BRAINERD ELECTRIC RY.
STREETCAR LINE


N
RICE LAKE
MILL ST.
ASH AVE.
(H ST.)
3RD AVE.
MISSISSIPPI RIVER
KINDRED ST.
KINGWOOD ST.
FRONT ST.
8TH ST.
6TH ST
WILLOW ST.

COMPANY OWNED
TIMBER TRESTLE
ABOUT 100' SOUTH
OF CITY WAGON
BRIDGE

HORSECAR LINE RAN FROM 6TH AND MAIN STREETS TO 3RD AND ASH AVENVES. TURNTABLES LOCATED AT EACH END.

BRAINERD ELECTRIC [STREET] RAILWAY

Brainerd

Brainerd was an early lumbering and railroad center with a 1900 population of about 7,500 persons. A franchise was granted in 1885 to Charles F. Kindred for the construction and operation of a horsecar line. The Brainerd Street Railway was incorporated in July, 1886, by Kindred, C. E. Taylor and W. J. Dain. The completed line was about 1½ miles long and opened for operation in the fall of 1887. The horsecar barn was located at 3rd Avenue and Ash Avenue. Financial problems were encountered immediately and in 1888 the contractors who built the line filed mechanic's liens against the property. Becoming increasingly discouraged Charles Kindred finally left Brainerd in early 1889 and the company ceased operations.

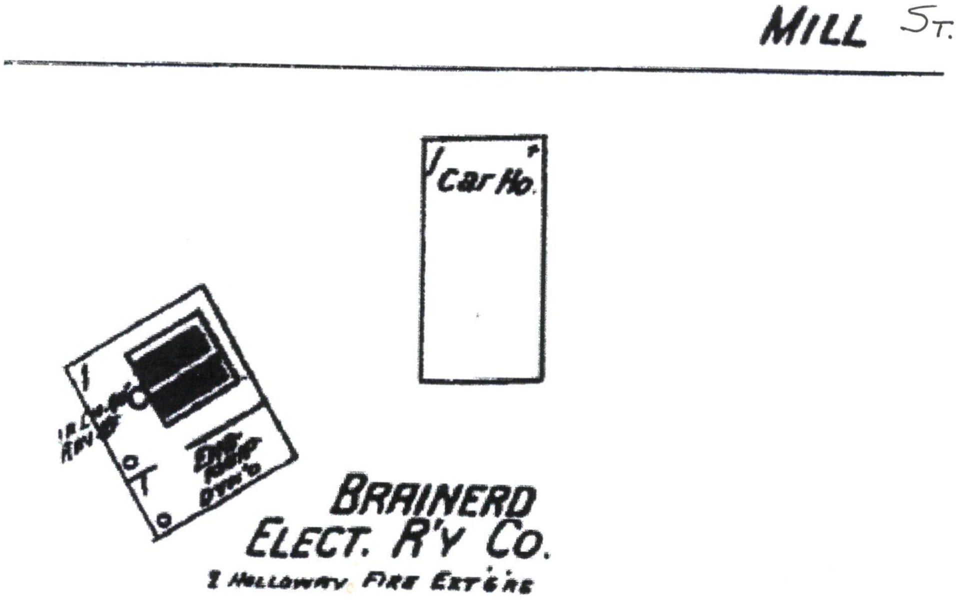
In October, 1892, Charles N. Parker, a prominent local operator of iron and brass foundries, requested the city council to investigate selling him the city's electric power plant. The eventual result was that he received a 30-year franchise for the operation of a street railway. The franchise provided that the line was to be placed in operation by July 1, 1893, and was to construct its own power plant.

The Brainerd Electric [Street] Railway was incorporated in March, 1893. Construction was begun promptly and the completed line placed in operation later in 1893. The carhouse and power plant were located on the west side of the Mill St. end of the line. The Brainerd Lumber Company sawmills were located directly opposite on the east side. The line was subsequently extended a short distance north on Mill St. An 1895 newspaper article mentioned the line was now "operating full length". Total length of the line was 3½ miles.

Four cars (numbers 1-4) were owned which were of the single-truck closed type with open platforms. These were later enclosed due to passage of the so-called "vestibule bill" by the state legislature.

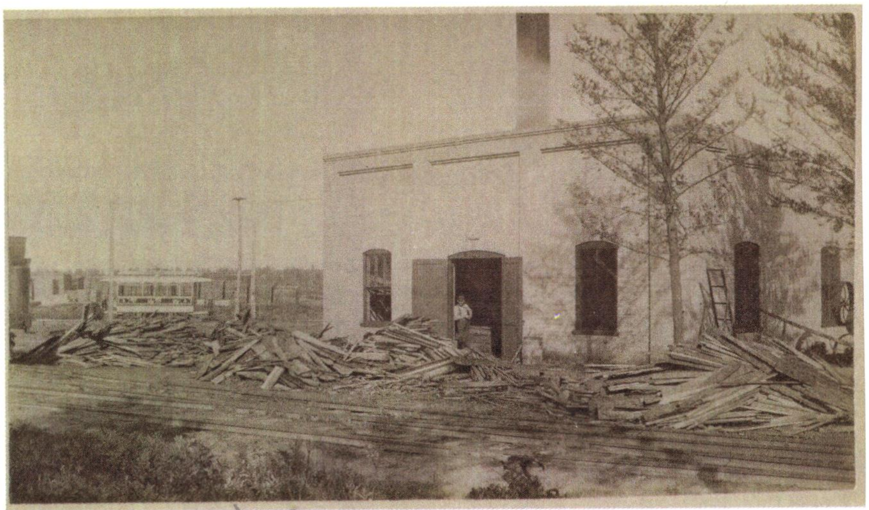
A severe windstorm destroyed both the city-owned and company-owned trestles over the ravine on June 2, 1898. Difficulties and confusion were encountered in proposing the erection of a new bridge by the city on which streetcar tracks could be laid. The street railway company stated that its operations were unprofitable and refused to construct its own bridge. The city eventually awarded a contract for bridge construction that did not include tracks and was not capable of supporting streetcars.

Mr. Parker decided to quit the street railway business. The track was abandoned but left intact in the streets. The four cars were loaded on railroad flat cars and shipped to Duluth for scrapping.



BRAINERD STREET RR
CWCHS

218-829-3268
Pam Nelson



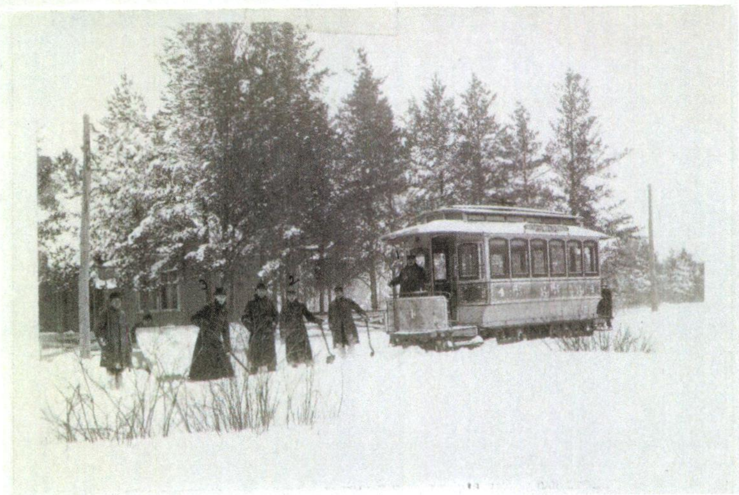
#1 car barn

According to the Brainerd Historical Society both lines were narrow gauge (gauge not specified).
INCORRECT ?
Horsecar line had one passing track: on Kindred St.

1890 Population was 5,703

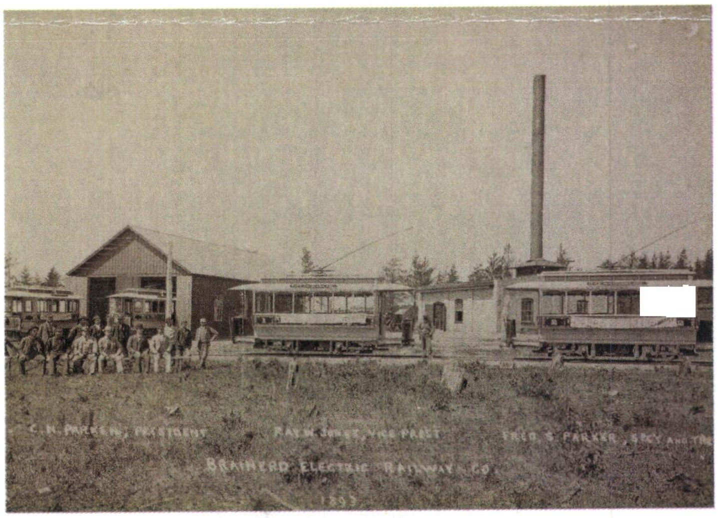
Electric railway powerhouse was built of Schwartz's steam brick.

#4 Street car & carriage bridge
with walkway for Pedestrians



#3 Ash & Mill Ave. NE Brainerd
1892 Fred Parker, Lee Hallet, Harry Treglawny
#1 #2 #3

Builder ?
LaClede 1892 or 1893
ERM Supp page 98-99
ERM Page 335 photo ITC #2
DSR #63-66
Brightwood Ry #10
Identical bodies and trucks
Robinson Machine Co. truck



C. N. PARKER, PRESIDENT
RAY W JONES, VICE PREST
FRED S PARKER, SECY AND TRE
BRAINERD ELECTRIC RAILWAY CO
1893

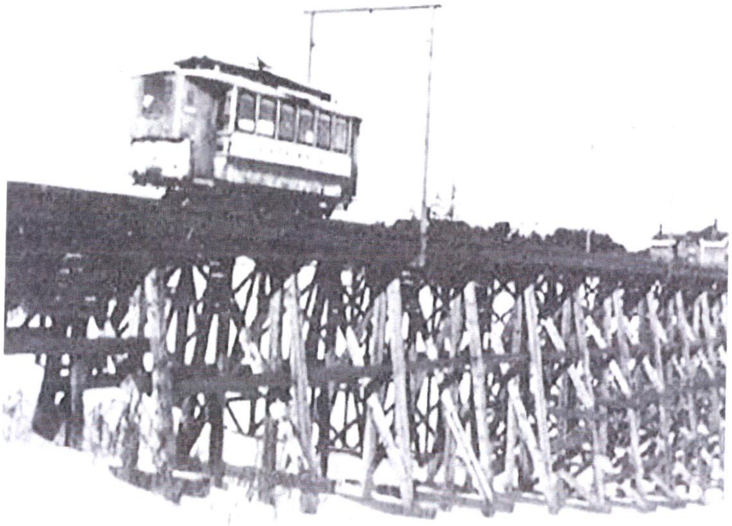
#2 1893

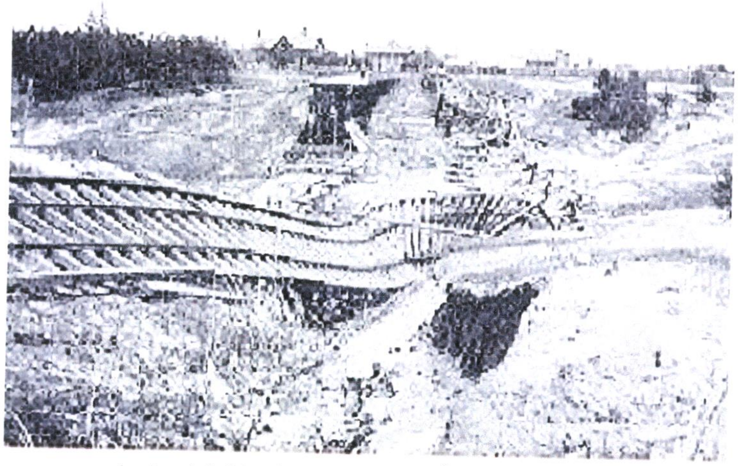
#5

(each car has banner: OPERA HOUSE TONIGHT)
Car side painted gold: BRAINERD ELECTRIC RY
on cars signs: RICE AND [illegible] LAKE

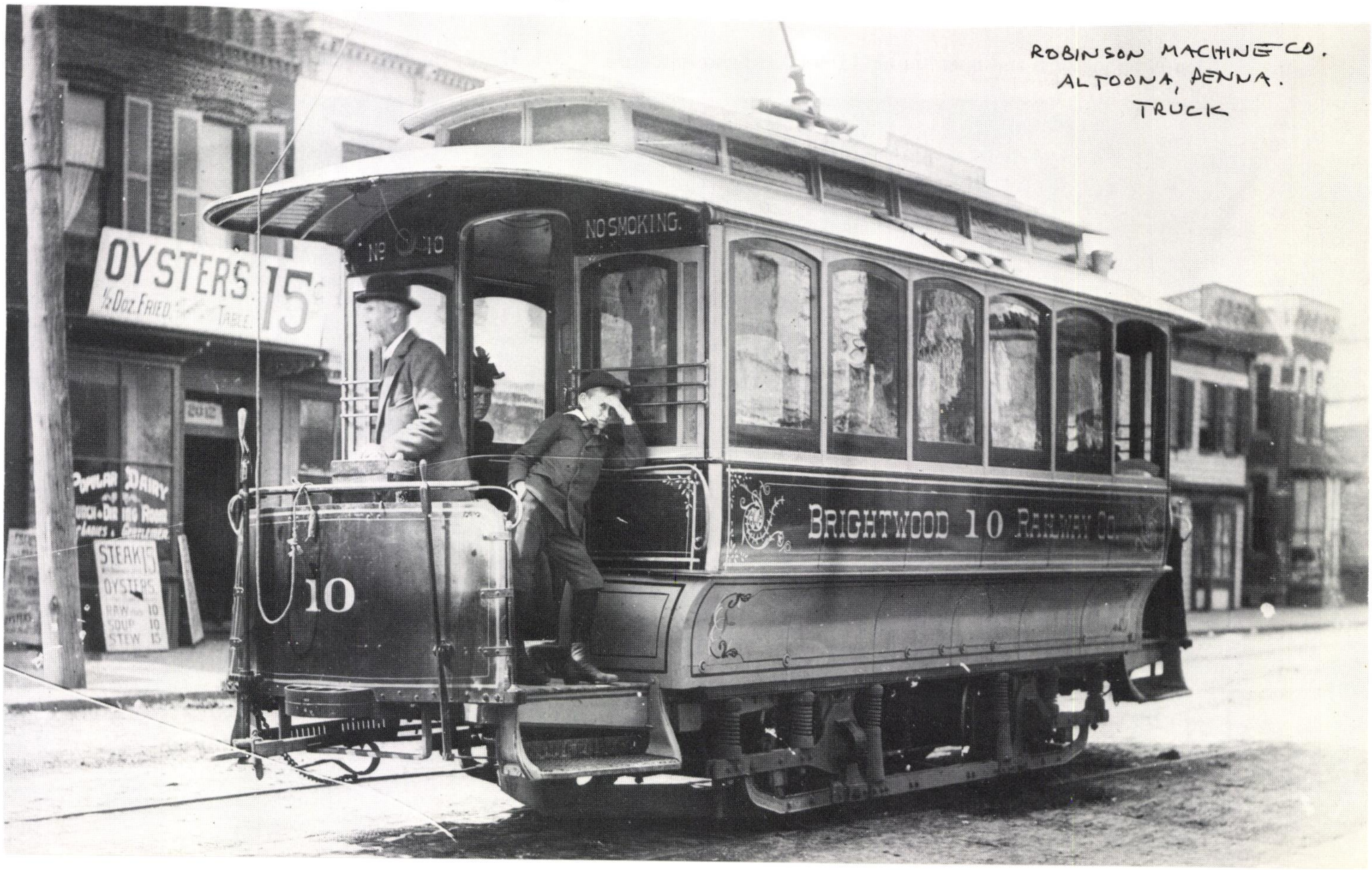
22845 (c.f 2884)
2
2843

Car barns of C.N. Parker Electric Railway
1894
-88





6-2-1898 WINDSTORM DAMAGE



ROBINSON MACHINE CO.
ALTOONA, PENNA.
TRUCK

OYSTERS 15¢
½ Doz. FRIED
TABLE
No 10
NO SMOKING.
BRIGHTWOOD 10 RAILWAY CO.
10
2012
POPULAR DAIRY
STEAK 15
OYSTERS
RAW 10
SOUP 10
STEW 15

AVERY PV119ED

negatives at the Minnesota Historical Society. The Editor also found another 1890s view of streetcars carrying portable mailboxes in the MSM collection. Here they are.

MSM NEWS SUMMARY

See Streetcar Currents for the full story (www.trolleyride.org)

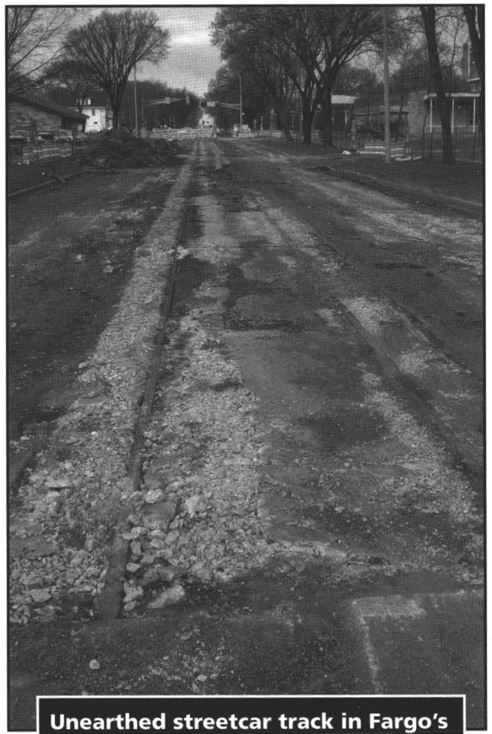
Despite a weakening economy, MSM saw a slight ridership increase in 2008 over 2007. The year ended with over $190,000 in the museum's bank accounts, although much of that will be spent this year on the Isaacs Carbarn fire suppression system and the restoration of Winona #10. The Annual Appeal has brought in over $14,000. The Winona #10 restoration has been bolstered by a $5000 grant from the 20th Century Electric Railway Foundation, $2000 from the Onan family Foundation and $1000 from the Linden Hills Neighborhood Council.

The restoration of Winona #10 progresses. It had folding steps that were manually actuated with the doors by the operator. The original components are long-gone. Volunteers have been replicating the many parts that make up the mechanism. Seat frames and slats have been fabricated and are being sanded and finished. The original builders added full width steel end straps, resulting in a unitized bench seat. Hot rolled steel straps have been sheared, de-burred, drilled and countersunk to accept wood screws. Cooperative Plating of St. Paul liked our story—perhaps the part about TCRT's Snelling Shops being located a block from their facility—and graciously consented to prep and zinc plate 37 straps at no cost, thus improving paint adhesion and assuring that scars will never result in rust. Walk-over seat hardware is also progressing. A number of 5/8" cold drawn steel rods are being machined at Lake Harriet, which consists of facing the ends and boring cross holes at precise locations.

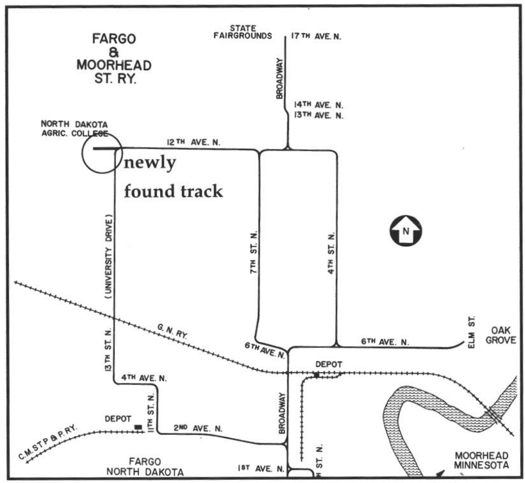
Merchandise sales brought in $17,000 in 2008. A new item for this year is an 11x34 inch poster reproduction of a colorful 1909 Twin Cities streetcar system map.

FARGO STREETCAR TRACKS UNCOVERED

Mark Piehl, Curator of the Clay County Historical Society in Moorhead, reports that a recent Fargo street construction project has uncovered streetcar tracks unused since 1937. Furthermore, the construction has revealed track on 12th Avenue N. that was previously not known to exist. Previously it was thought that the track on 12th Avenue N. extended only as far west as University Drive, where it turned south. Now we know that the track extended at least 60 feet west of University Drive, near the center of the older portion of the North Dakota State University campus. It was probably used for boarding extra cars to the campus, perhaps for occasions such as football games.



Unearthed streetcar track in Fargo's 12th Avenue. Mark Piehl photo.

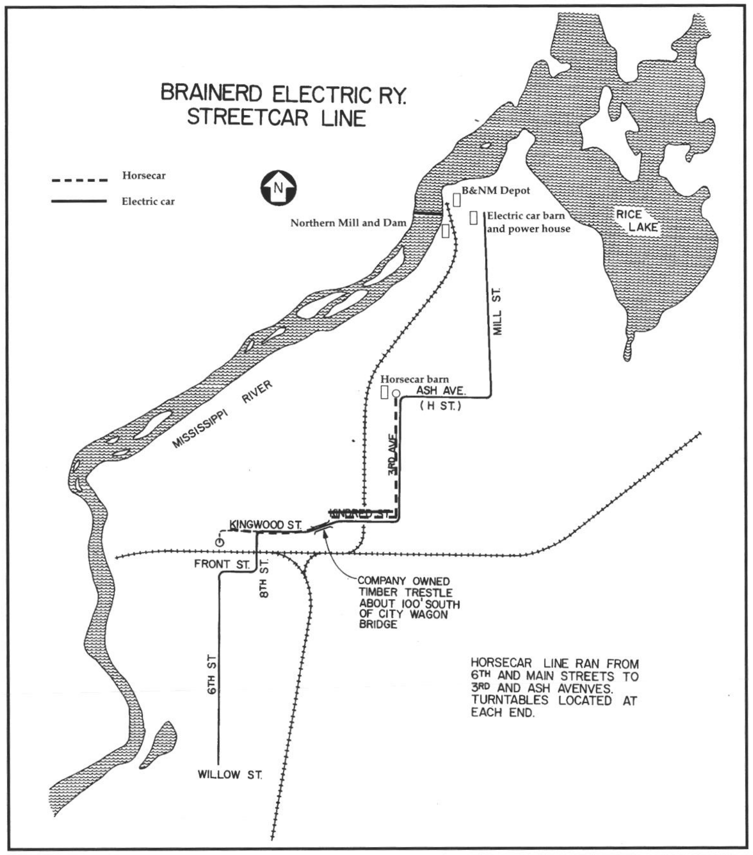

FARGO
&
MOORHEAD
ST. RY.
STATE FAIRGROUNDS
17TH AVE. N.
BROADWAY
14TH AVE. N.
13TH AVE. N.
NORTH DAKOTA AGRIC. COLLEGE
12TH AVE. N.
newly
found track
(UNIVERSITY DRIVE)
13TH ST. N.
7TH ST. N.
4TH ST. N.
N
G. N. RY.
6TH AVE. N.
6TH AVE. N.
ELM ST.
OAK GROVE
DEPOT
4TH AVE. N.
11TH ST. N.
DEPOT
2ND AVE. N.
C.M.ST.P.&P.RY.
BROADWAY
FARGO
NORTH DAKOTA
1ST AVE. N.
MOORHEAD
MINNESOTA

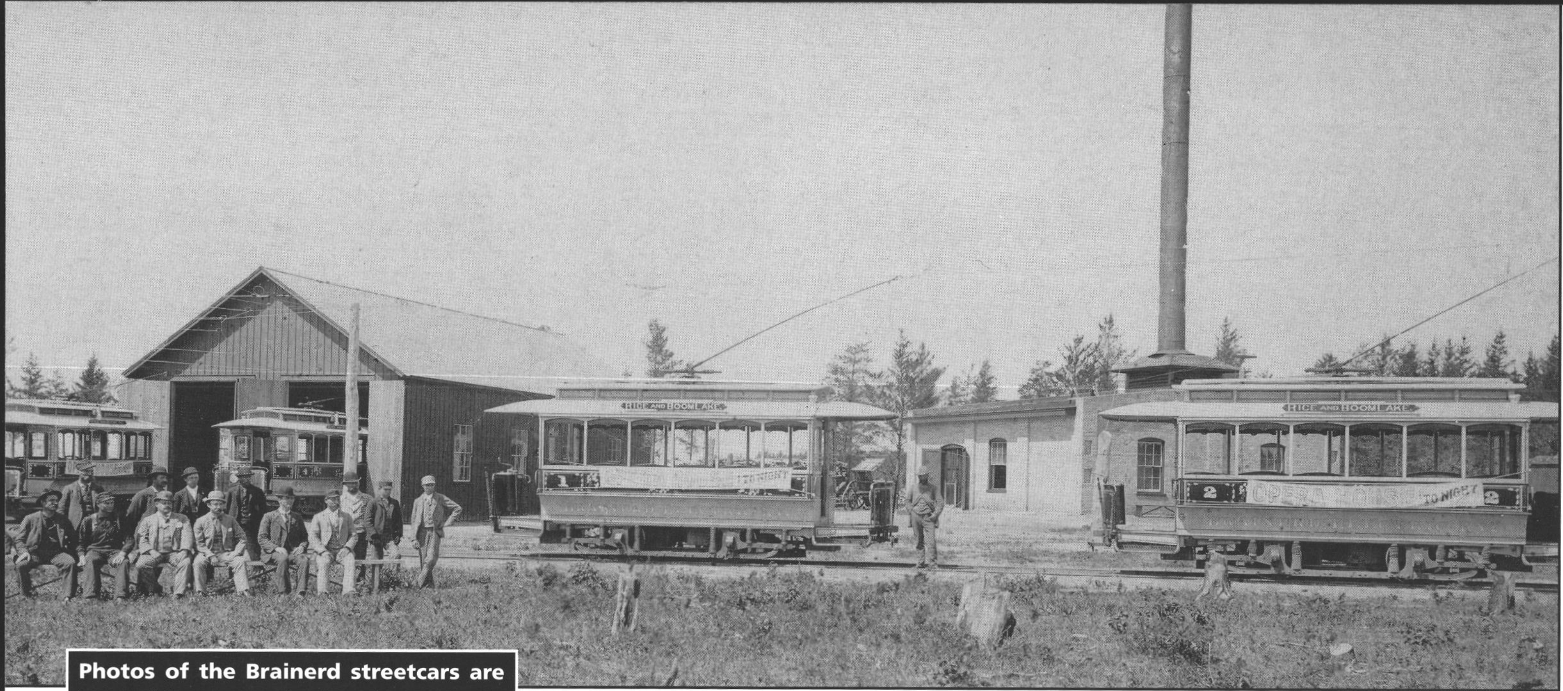
BRAINERD'S STREETCARS

By John C. Luecke

The construction of the Brainerd & Northern Minnesota's new line north out of Brainerd in turn spawned the incorporation of the Brainerd Electric Street Railway Company in March of 1892. While the population of Brainerd had risen to 5703 souls in 1890 (7500 in 1900), this population alone would have been hard pressed to support a streetcar line in the city. The B&NM provided the needed impetus.

The idea of a street railway was not new to Brainerd and indeed the Brainerd Electric Street Railway Company was a revitalization of a scheme which had lain dormant for four years. The Brainerd Street Railway had its very beginnings on 20 October 1885 when C. F. Kindred was granted franchises to build and operate a horse-drawn streetcar line within the city. The line was built during 1886-87 from a turntable near the Northern Pacific's Headquarters hotel-depot, north one block, passing the Kindred House, then east on Kingwood, across the city's wagon - bridge over the ravine to Kindred Street where a passing siding was laid out. From there the line continued to a second turntable at the end of the line near the middle of Ash Avenue and Third Avenue. The


BRAINERD ELECTRIC RY.
STREETCAR LINE
Horsecar
Electric car
N
B&NM Depot
Northern Mill and Dam
Electric car barn and power house
RICE LAKE
MILL ST.
Horsecar barn
ASH AVE.
(H ST.)
MISSISSIPPI RIVER
3RD AVE
KINDRED ST.
KINGWOOD ST.
FRONT ST.
8TH ST.
COMPANY OWNED TIMBER TRESTLE ABOUT 100' SOUTH OF CITY WAGON BRIDGE
6TH ST
HORSECAR LINE RAN FROM 6TH AND MAIN STREETS TO 3RD AND ASH AVENVES. TURNTABLES LOCATED AT EACH END.
WILLOW ST.



Photos of the Brainerd streetcars are rare. This one manages to capture in one picture all four cars, the carbarn and power house and the company's management. Crow Wing County Historical Society collection

company's horse barn was on the corner of Ash and Third Avenues. Plans were made to extend the line to the site of the new dam across the Mississippi River, but these were never prosecuted.

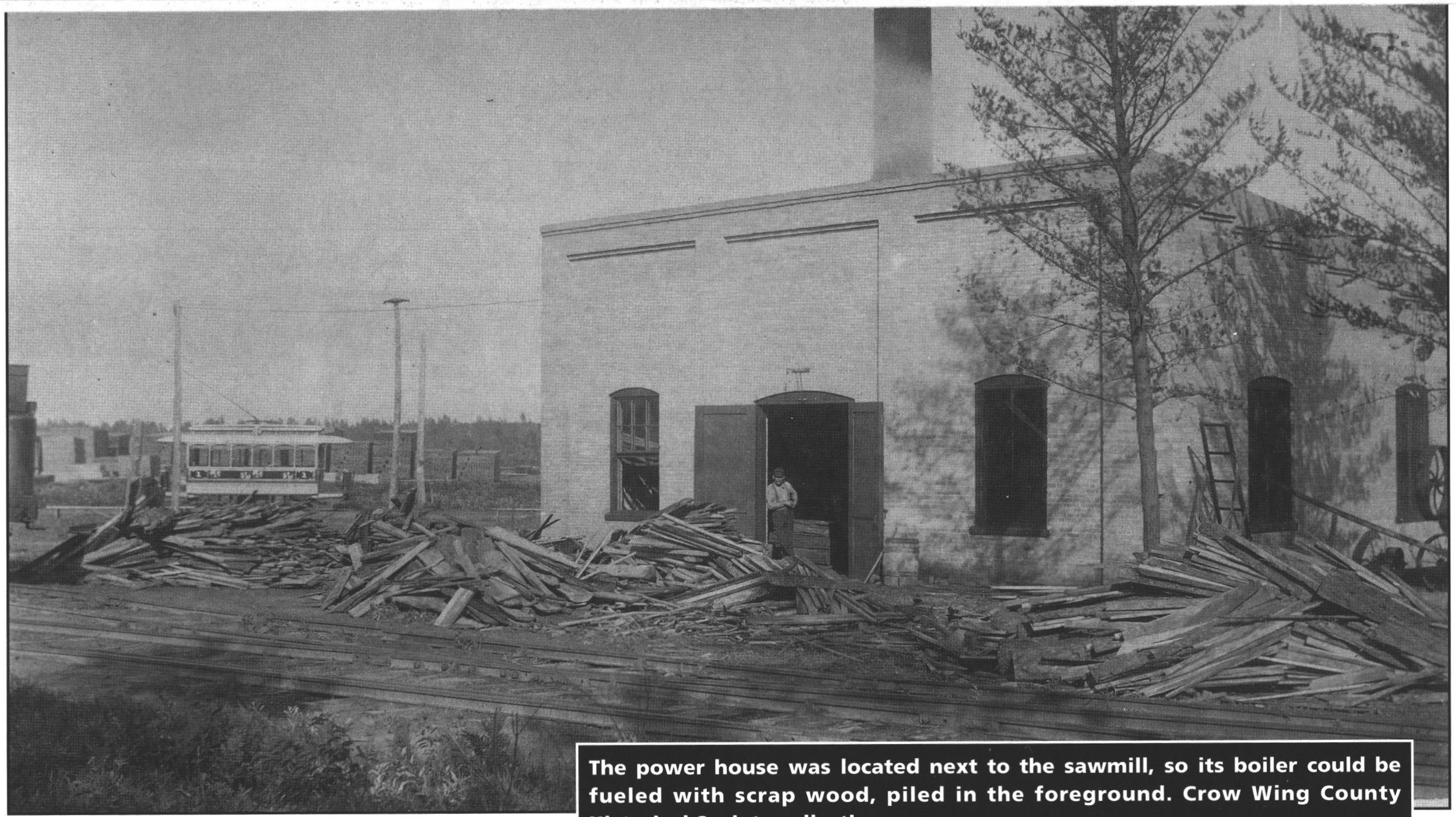
A major setback came to the horsecar line in June of 1888 when the Villard Hotel, the anchor for the company's trade, was consumed by fire. From then on the 1.5 mile line did not fare well and by 1888, Kindred's company went into receivership and he left Brainerd for Philadelphia in disgust. The line lay dormant for a time and on 1 April 1889, the city ordered the rails removed for one block at either side of the bridge over the ravine. Finally the Brainerd Street Commissioner ordered the rails taken up wherever they interfered with travel or construction and stockpiled in the old horse barn.

While the collapse of the Kindred line would seem to have crushed the prospects of ever obtaining a viable street railway, such a demise was not in the cards, at least not yet. On 21 June 1889 the city council granted a 25-year franchise for a new narrow gauge street railway to J. N. Nevers, H. J. Spencer and Hy Spaulding of Brainerd. On 5 January 1890 the completion date of 31 December 1891 was set. This trio of businessmen appear to have had no desire to build and operate this public utility and became involved in the idea only to sell the franchise to others. In 1892, Charles N. Parker arrived as a likely candidate.

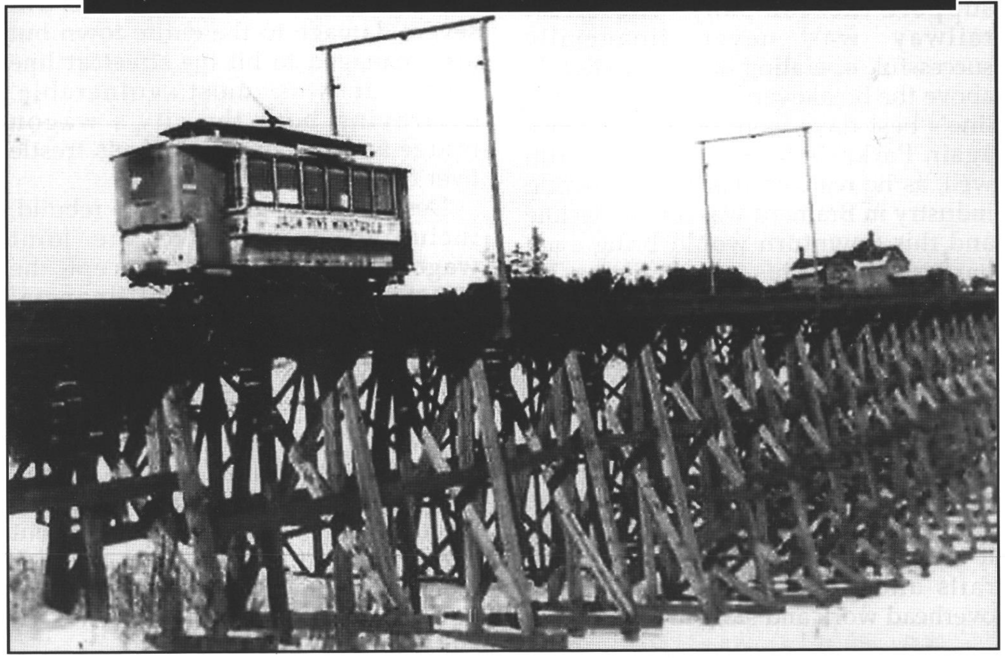
Parker's interest in the street railway stemmed from his realization that neither the NP or the B&NM had made any provisions for carrying passengers over the three miles between their respective depots. The physical

Small single truck streetcars didn't handle snow well. Crow Wing County Historical Society collection

AVERY®c
PV119ED



The power house was located next to the sawmill, so its boiler could be fueled with scrap wood, piled in the foreground. Crow Wing County Historical Society collection.
Below: This is the company's trestle that spanned the ravine on the north side of town. The car has had its vestibules enclosed, as required by state law.



connection was in place after the NP extended its Schwartz brick yard spur to the new mill site on the north side of town, but no plans were made to operate a passenger connection between the two terminals. Parker's foresight told him that some kind of connection was necessary and that the street railway was just the tool for the job. Legal wrangling followed. Mayor Hagberg pushed the issue of the line being electrified rather than horse drawn. Parker then requested that he be allowed to purchase the city's power plant but this cost cutting bid failed. On 17 September 1892 the city council overrode the Mayor's veto and parker was given a thirty year franchise to operate the Brainerd Electric Street Railway Company, which was to be completed by 1 July 1893.

The route began at Willow and South 6th and proceeded north to Front Street where it turned east. Running east to Eighth Street the line again turned north to Kingwood and then east once more to the ravine. Rather than put up with joint occupancy of the of the city's wagon bridge, Parker chose to construct his own crossing about 100 feet to the south. From the bridge the line proceeded to Third Avenue where it again turned north to H Street, then east on Ash to Mill, then finally north on Mill to the B&NM for a total of four miles of trackage.

Here the company built its carbarn and power plant and made connections to the B&NM's depot facilities. In an effort to muster additional patrons for the electric line, Parker also began development of a new block of brick business buildings. The city showed continued support for the project by donating an acre of land "in the southeast corner of lot 4, section 18" for the power house. The specifics concerning the line's terminal and power house were soon announced.

16 September 1892 Brainerd Dispatch

"The power house will be built as closely to the new mill as possible, so as to use the refuse matter of the mill for fuel. Power will be furnished by a 100 horse-power generator which will be propelled by a 125 horse-power engine, two boilers each of 120 horse-power capacity furnishing steam. The track will be laid with forty-pound steel rails. Mr. Parker will not use the wagon bridge over the ravine but will build a trestle expressly for the street car track. He will put on four motors (streetcars) at once but will have the power to propel more than double that number. The length of the line will be nearly four miles and Mr. Parker confidently assures us that it will built and in operation in forty-five days. The entire cost of the system will be in the neighborhood of $50,000. Mr. Parker will take personal charge of putting in the system himself and expects to save a great deal thereby."

GRAND FORKS STREET RAILWAY

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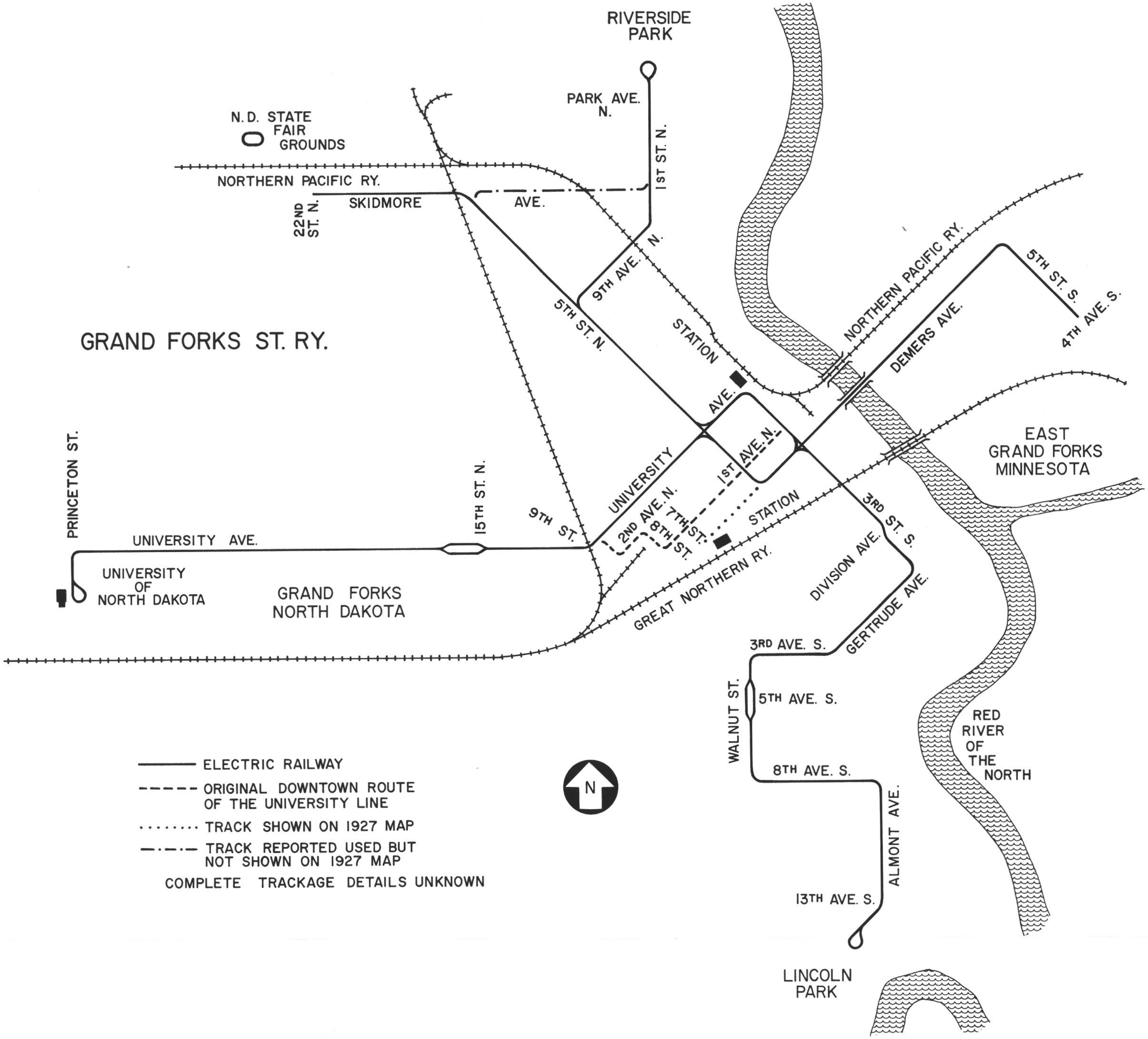

GRAND FORKS ST. RY.
RIVERSIDE PARK
PARK AVE. N.
1ST ST. N.
N. D. STATE FAIR GROUNDS
NORTHERN PACIFIC RY.
SKIDMORE
AVE.
22ND ST. N.
9TH AVE. N.
5TH ST. N.
STATION
NORTHERN PACIFIC RY.
5TH ST. S.
4TH AVE. S.
DEMERS AVE.
AVE.
1ST AVE. N.
UNIVERSITY
EAST GRAND FORKS MINNESOTA
PRINCETON ST.
15TH ST. N.
9TH ST.
2ND AVE. N.
7TH ST.
8TH ST.
STATION
3RD ST. S.
UNIVERSITY AVE.
UNIVERSITY OF NORTH DAKOTA
GRAND FORKS NORTH DAKOTA
GREAT NORTHERN RY.
DIVISION AVE.
GERTRUDE AVE.
3RD AVE. S.
WALNUT ST.
5TH AVE. S.
8TH AVE. S.
RED RIVER OF THE NORTH
ALMONT AVE.
13TH AVE. S.
LINCOLN PARK
N
ELECTRIC RAILWAY
ORIGINAL DOWNTOWN ROUTE OF THE UNIVERSITY LINE
TRACK SHOWN ON 1927 MAP
TRACK REPORTED USED BUT NOT SHOWN ON 1927 MAP
COMPLETE TRACKAGE DETAILS UNKNOWN

GRAND FORKS STREET RAILWAY

Grand Forks, N.D. , East Grand Forks, Minn.

1904 - 1934

GENERAL HISTORY

The Grand Forks St. Ry. was incorporated in 1892 by E. G. DeCelle of Minneapolis. A franchise was granted by the city during 1892; at this time the incorporaters were described as several local persons and several St.Paul, Minnesota, businessmen. W. C. Merryman of Phillips & Merryman Engineering Co., St.Paul, began surveying the projected lines 8-2-1892. An incorporation date of November 1892 was mentioned in another source; this date may have some other significance. However no track was ever laid.

The University of North Dakota was located about two miles from downtown Grand Forks with most of the distance being bleak, unbroken prairie. Transportation of students and faculty was difficult. University President Webster Merrifield was active in promoting organization of the Grand Forks Transit Co. in 1904 with the objective of providing transportation between the campus and downtown. The incorporaters were: E. J. Lander, C. F. Whitcomb, O. N. Hatcher, O. S. Hanson, D. R. Beecher (Treasurer), O. A. Webster (Secretary), J. A. Dinnie, J. D. Bacon (Vice President), A. I. Hunter, W. H. Kelsey and W. J. Murphy. R. B. Griffith was President. Webster Merrifield had an ownership interest.

An argument ensued as to whether gasoline motor cars or electric streetcars should be operated. Electricty won when it was determined that installation of an additional dynamo at the University's powerhouse would provide sufficient generating capacity. Construction of the line between the campus and downtown began 7-13-1904 and completed 11-20-1904.

Several prominent citizens felt the need for an enlarged street railway system in Grand Forks. The first new track construction occurred 10-3-1908. The Grand Forks Street Railway was incorporated 12-9-1908. On 6-18-1909 the new company purchased Webster Merrifield's ownership interest in the Grand Forks Transit Co. By 7-31-1909 purchase of the final ownership interests in the Grand Forks Transit Co. had been completed. The expansion program continued from 1909 thru 1913 as will be described in the section on Track Construction.

Company offices were located at 217 S. 3rd St. Officials of the company for most of its existence were: T. J. Smith, President; E. P. Chandler, Vice President; G. C. Gowran, Secretary; O. S. Hanson, Treasurer; and O. E. Odegard, Auditor. General Managers during the years of streetcar operation were: Thomas Campbell, 1909-1910; A. E. Morrison, 1910-1911; Thomas Roycroft, 1911-1921; W. L. Hawkes, 1921-1927; and O. E. Odegard, 1927-1934.

The line to East Grand Forks, Minnesota, had been abandoned in 1919. Two of the three remaining lines were abandoned during 1931. The University line lasted until 1934 when the re-paving of University Ave. forced its abandonment. Buses replaced its streetcars 7-1-1934.

TRACK CONSTRUCTION

Construction began 7-13-1904 at the University end of the line. The route was from 3rd St. and Alpha Ave. (now 1st Ave. N.) west on Alpha to 8th St., north on 8th St. to International Ave. (now 2nd Ave. N.), west to 9th St., north to University Ave., and west on University Ave. to the campus, ending at the approximate location of the President's residence. The line was opened for operation on 11-20-1904.

1907 U.S. Census: total track 2.25 miles (no sidings). Overhead construction consisted of 1.25 miles within the city limits of span-wire construction and 1.00 miles outside the city limits ofi side-bracket construction. One railroad was crossed at grade.

New track construction on 3rd St. began 10-3-1908.

The Lincoln Park line was opened for service 7-16-1909.

Construction of the East Grand Forks line began in 1910 from the Great Northern Ry. station on DeMers Ave. and was completed in early 1911.

The Riverside Park line together with a branch to the North Dakota State Fairgrounds was completed in late 1911 or early 1912.

Reconstruction and relocation of the University line was accomplished in early 1913. The original downtown trackage was abandoned and replaced by new track built on University Ave. The trackage west of 20th St. N. was located on a center right-of-way with one-way street traffic on either side. The line turned south onto private right-of-way at Princeton St. into the University campus about 400 ft., ending in a sharp radius loop in front of Chandler Hall, the mechanical engineering building, near the banks of the English Coulee. Operation downtown was counter-clockwise around the 5th St.-DeMers Ave.-3rd St.-University Ave. loop.

The DeMers Ave. bridge was a wooden structure which was partially destroyed by a fire originating in East Grand Forks resulting in cessation of service between Grand Forks and East Grand Forks. The East Grand Forks line was officially abandoned 6-30-1919. At this same time a re-routing of the Grand Forks lines was initiated which apparently also resulted in relocating the special work at 3rd St. and DeMers Ave. The branch-offs were reversed, heading east instead of west. Consideration was given to installing track on the new Sorlie Memorial Bridge under construction during 1923 but newspaper articles indicate the company claimed it was not in a financial position to afford the expenditure.

In later years the branch line to the Fairgrounds was used only during Fair Week. Track had been added on Skidmore Ave. between 1st St. N. and 5th St. N. expanding the service area on the Riverside Park line.

The Riverside Park line was replaced by buses in June 1931, with the Lincoln Park abandonment occurring later in 1931. Repaving of University Ave. brought about the abandonment of the University line 7-1-1934. One final sentimental run on that line was made 7-15-1934 for company directors, professors, city officials and businessmen. One car was used carrying about 24 passengers.

History of track mileage compiled from transit directories.

Year	**Total Track**	**First Track**	**Sidings**
1916-1918	8.50		
1923-1926	6.98	5.76	1.22
1927-1928	7.505	5.728	1.597
1929	7.505	7.487	0.018
1930-1931	6.60		
1932-1933	2.24		

	Dec 1917	Nov 1923
President	R B Griffith	T J Smith
Vice President	E J Lander	L Stinson
Secretary	O A Webster	G C Gowran
Treasurer	A I Hunter	A I Hunter
Superintendent		E O Odegard

TRACK CONSTRUCTION

The Electric Railway Journal reported 2.0 miles of track was constructed during 1910.

POWER GENERATION

The Grand Forks Gas & Electric Company during 1909-1910 installed one General Electric Co. 550 volt DC 225 KW Generator direct-connected to one Ball 350 h.p. Corliss engine together with one Stirling 463 h.p. Boiler for street railway purposes. During 1922 the steam-driven unit was replaced by one 550 volt DC 250 KW Motor-Generator Set.

Grand Forks, N.D.
1907 U. S. Census
Y/E 1-9-1908

Grand Forks Transit Co.
2.25 miles of track; 30# T rail.
Power purchased for one D.C. Dynamo 50 Kw capacity.

McGraw Directory
May 1920

Grand Forks St. Ry.
Track: 8.0 miles first track + .5 miles sidings and carhouse track = 8.5 miles total.
Equipment: 12 psgr. motors, 7 psgr. trailers, 2 service motors.

ERJ

- 8-31-1912: will award contract for building a 1½ mile extension in East Grand Forks.
- 3-6-1915: during next two weeks expect to award contracts to build about 1 mile of new track in Grand Forks
- Track Mileage in North Dakota
  1918 7.15 miles

POWER GENERATION

Power was purchased from the Red River Power Co. which had installed: one Stirling 463 h.p. boiler, one Ball Corliss engine of 350 h.p. direct connected to one General Electric 500 volt D.C. 225 KW generator. During 1922 the power company installed one new 250 KW motor-generator set replacing the original engine-generator unit.

CARHOUSE & SHOPS

This facility was located at 1008 North 5th Street.

OPERATIONS

During the Grand Forks Transit Co. era, operations were shut down completely during the summer months when the students were on vacation.

When the University line was rebuilt and relocated during 1913, the operation in downtown Grand Forks was counter-clockwise around the 5th St.-DeMers Ave.-3rd St.-University Ave. loop. Apparently there were three lines, each operated independently: University, Lincoln Park and Riverside Park. There was no indication as to what service was provided on the Fairgrounds branch line.

According to one source, service up to 1920 required seven cars.

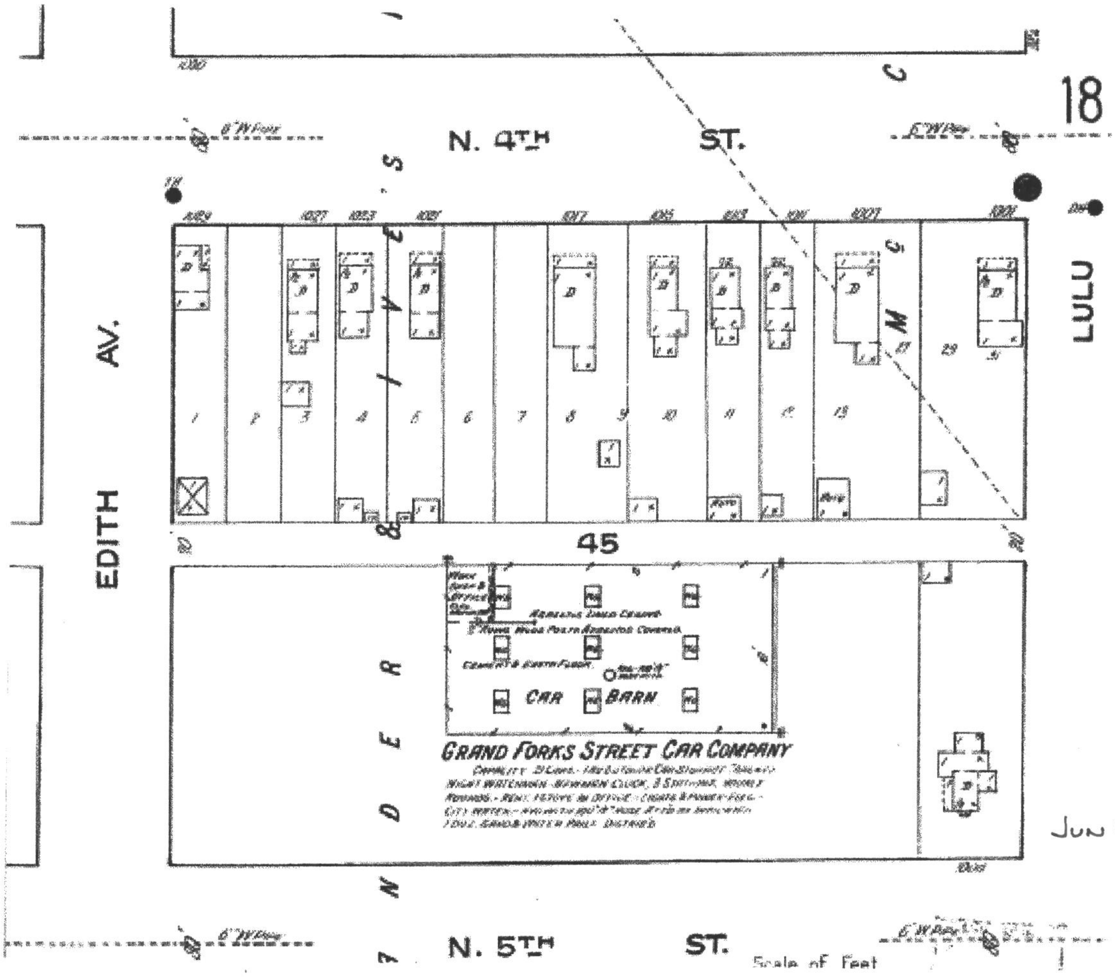
After abandonment of the East Grand Forks line in 1919, the University line was through-routed with the Lincoln Park line as the "University-Lincoln Park" line. Service was on a 15-minute headway when the University was in session, and 30-minute headway on Sundays, holidays, and summer vacation months. Tripper service was provided to the University. The "Riverside Park" line service was on a 20-minute headway at all times. As related in the Track Construction section, the special work at the 3rd St.and DeMers Ave. intersection was re-arranged, apparently so that some service could be provided on DeMers Ave. east of 3rd St. as far as the Red River of the North. But we don't know how this service was operated.

One source reported that track was built at an unspecified date on Skidmore Ave. between 1st St.N. and 5th St. N. Northbound Riverside Park line cars operated over 9th Ave. N. to 1st St. N. Southbound cars operated over Skidmore Ave. to 5th St. N.

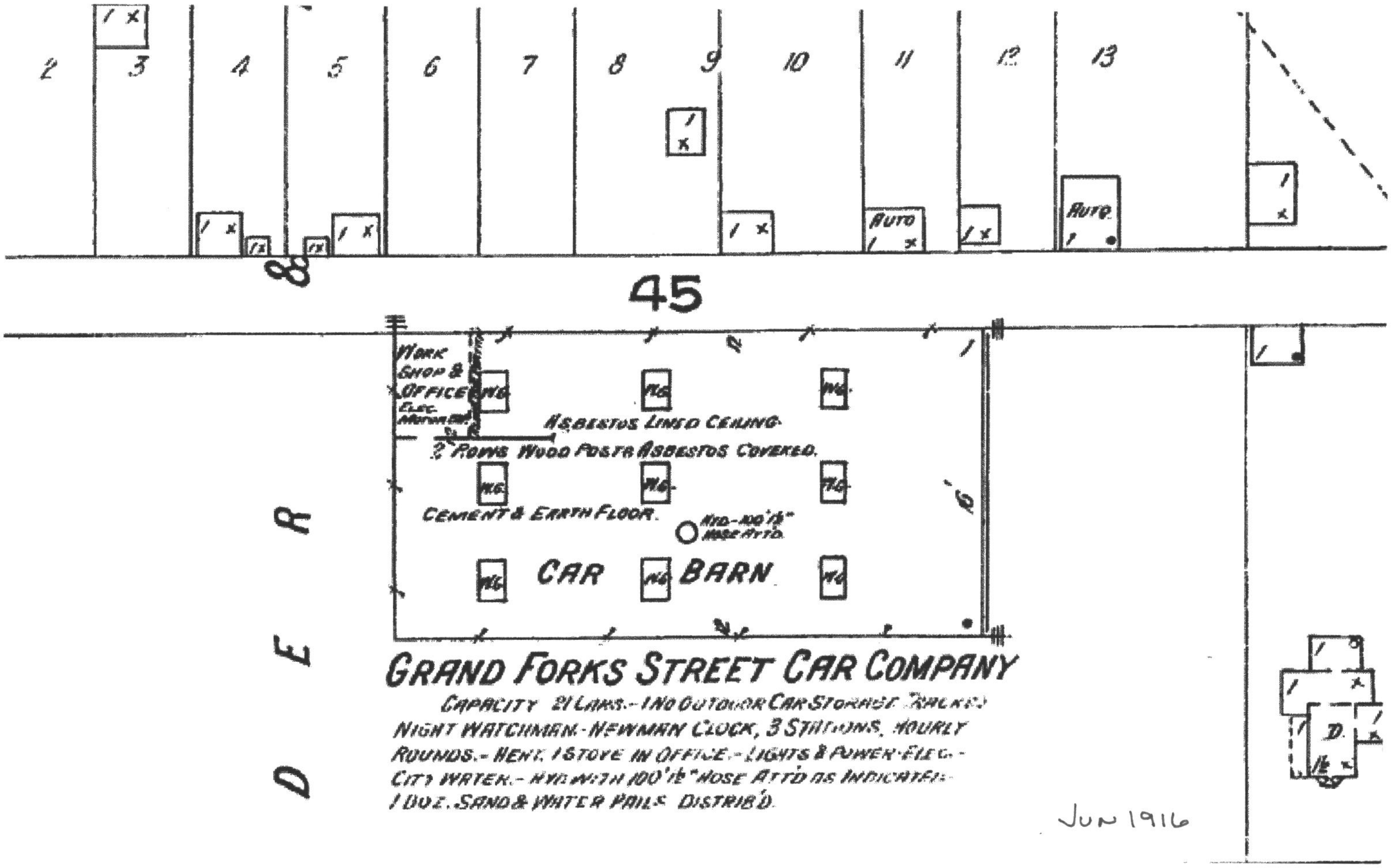
In later years the branch line to the Fairgrounds was operated only during Fair Week. Fair Week service may have lasted until 1932.

There was a summer or two in the depression before the "Riverside Park" line was abandoned when service was reduced to an hourly basis.

The "Lincoln Park" and "Riverside Park" lines were replaced by buses during 1931. The "University" line was replaced by buses 7-1-1934.


18
N. 4TH ST.
LULU
EDITH AV.
45
CAR BARN
GRAND FORKS STREET CAR COMPANY
N. 5TH ST.
Scale of Feet

JUN 1916


2
3
4
5
6
7
8
9
10
11
12
13
AUTO
AUTO
45
R
E
D
WORK SHOP & OFFICE
ELEC. MOTOR
ASBESTOS LINED CEILING
2 ROWS WOOD POSTS ASBESTOS COVERED.
CEMENT & EARTH FLOOR.
HYD.-100' 1½" HOSE ATT'D
CAR BARN
D.
GRAND FORKS STREET CAR COMPANY
CAPACITY 21 CARS.-1 NO OUTDOOR CAR STORAGE TRACKS
NIGHT WATCHMAN-NEWMAN CLOCK, 3 STATIONS, HOURLY ROUNDS.-HEAT, 1 STOVE IN OFFICE.-LIGHTS & POWER ELEC.-
CITY WATER.-HYD WITH 100' 1½" HOSE ATT'D AS INDICATED.-
1 DOZ. SAND & WATER PAILS DISTRIB'D.

JUN 1916

EQUIPMENT

Grand Forks Transit Co.

A single-truck, double-end, closed passenger motor car and passenger trailer were purchased from the Duluth St. Ry, in November 1904.

#1 ex DSR 19, LaClede Car Co. 1890.
#2 ex DSR/SRTR 102, John Stephenson Co. 1889. (Motors and controls had been removed by DSR.)

Number 3 was a single-truck, double-end, deck roof, semi-convertible passenger motor car built by American Car Co. on order number 635 for delivery 2-15-1906. 20'8" body, Brill 21E truck. Builder's photograph 3-3-1906. Renumbered 110.

Number A1 was a single-truck (pedestal), double-end Snow Plow built by the J. G. Brill Company on order number 15338 dated 7-7-1906.

The 1907 U.S. Census listed three closed passenger cars (two motor cars and one trailer) and one snow plow (motorized).

Grand Forks Street Railway

Number A2 was a single-truck Snow Sweeper order from McGuire-Cummings Mfg. Co. in 1909.

Numbers 4, 5 and 6 were single-truck, double-end, deck roof, semi-convertible passenger motor cars built by American Car Co. on order number 821 dated 4-20-1909 for delivery 7-15-1909. 20'8" body, Brill 21E truck. Builder's photo 7-13-1909. Renumbered 104, 106, 108.

Number 102 was a single-truck, double-end, deck roof, semi-convertible passenger motor car built by American Car Co. on order number 912 dated 7-13-1911 for delivery 10-5-1911. 20'8" body, Brill 21E truck. Builder's photo 11-23-1911. Sold to Capital Car Line, Bismarck, N.D.

Two 18 ft. single-truck, closed passenger motor cars were purchased from the Dorner Railway Equipment Co., Chicago, in June 1909. Each was equipped with one Brill 21E truck and two G.E. 800 motors. They became numbers 112 and 114.

Four open passenger trailers were purchased from the Twin City Rapid Transit Co. 6-15-1909. These were ex St.Paul City Ry. 1610,1613,1626,1630 open motor cars built by LaClede Car Co. in 1893. The motors and controllers had been removed by TCRT before the sale. They were re-numbered 2, 4, 6 and 8.

According to one source service up to 1920 was provided by seven cars. Four single-truck, double-end, deck roof, semi-convertible passenger motor cars with hand brakes were numbered 102,104,106,108. They were painted dark green with brown roof. One single-truck, double-end, deck roof passenger car numbered 110 was generally similar to the previous four cars except that it was longer, windows were narrower, and some other details varied. Two single-truck passenger motor cars numbered 112 and 114, apparently purchased second-hand, were reportedly similar in appearance to older Winnipeg streetcars. Four open passenger trailers numbered 2,4,6 and 8 were used mostly in Fairgrounds service. Work equipment consisted of one snow plow, one snow sweeper, and a single-truck flat trailer used for hauling rails and ties.

Six single-truck, double-end Birney cars were acquired from St.Louis Car Co. during 1920 on their order number 1233 dated 3-20-1920. They were numbered 116 thru 126, even numbers only. They were equipped with a St.Louis #7 truck and painted medium green and white outside, cream with varnished wood inside. The cars were placed in service 1-27-1921 on the Riverside Park line, and 1-30-1921 on the University-Lincoln Park line. Cars 116,118,120 and 122 were assigned to the University-Lincoln Park line while 124 was assigned to the Riverside Park line. Car 126 was the extra car which replaced each car one day per week so that each car would have an off day for cleaning and servicing at the carhouse. Each morning, however, the off-duty car was obliged to make a tripper run to the University. The replacement schedule was Monday 116, Tuesday 118, Wednesday 120, Thursday 122, Friday 124; on Saturday 126 itself was serviced. Passengers did not like the Birney cars as they swayed from side to side and bobbed up and down due to the light weight of the cars and the deteriorated condition of the track. They were irreverently called "tin cans" and "jiggers".

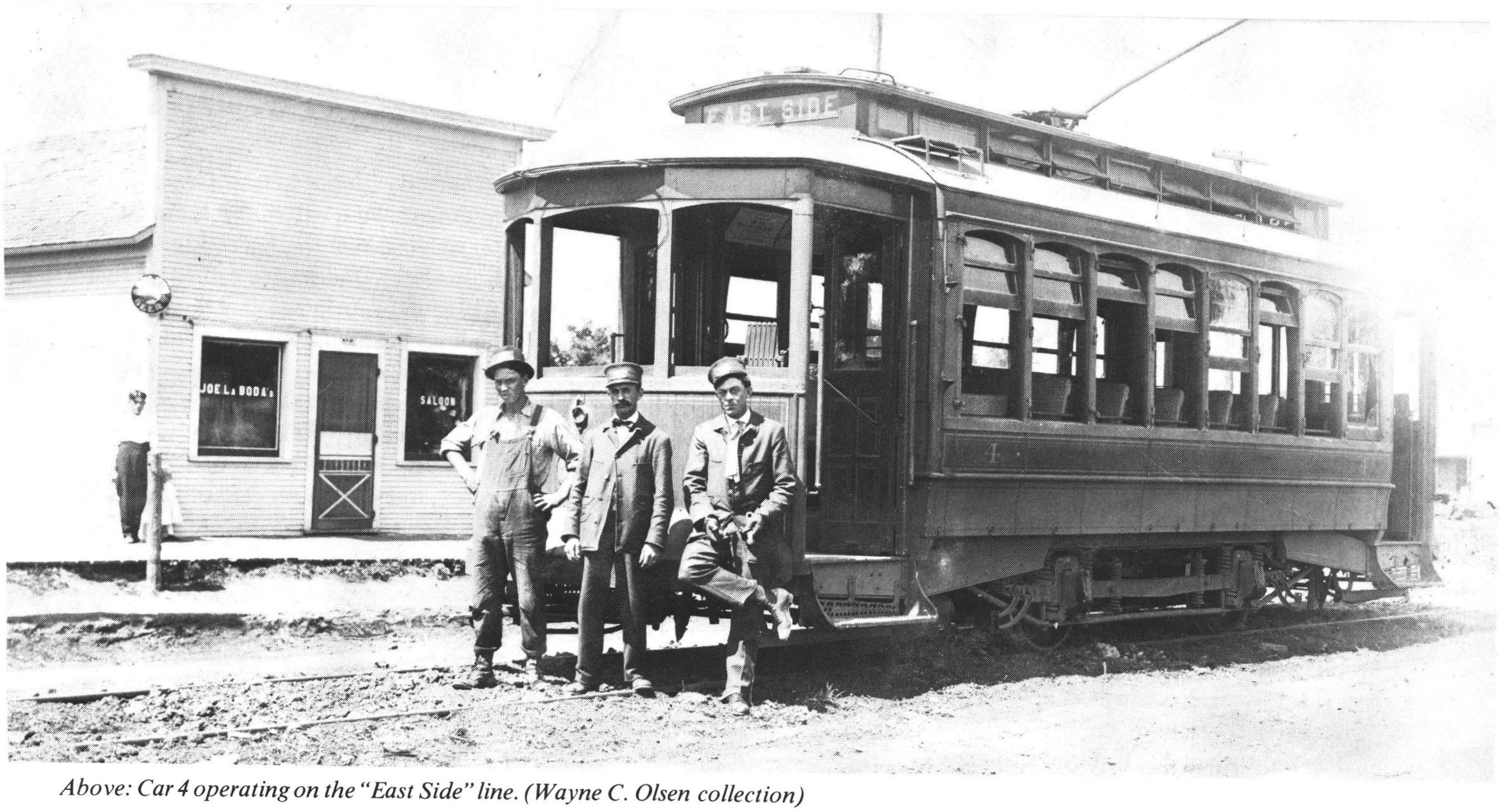
A transit directory dated November 1923 listed 15 passenger motor cars (six one-man), 6 passenger trailers, and 3 service motor cars.

The older single-truck cars gradually became inoperable in later years due to lack of maintenance and spare parts. Car 102 was sold to the Capital Car Line, Bismarck, North Dakota.

As cars were still needed for tripper service to the University as well as for Fairgrounds service, three single-truck, double-end Birney cars were acquired in 1930 from Oshkosh, Wisconsin. These cars were part of a 15-car order, numbered 70-84, built for Oshkosh in 1919 by Cincinnati Car Co. and were equipped with a Cincinnati #139 truck. The three cars were renumbered 128,130 and 132. They were used only for the special services mentioned; they were never used for regular service on any line.

ORDER NO.
2395

The nine Birney streetcar bodies were sold for various purposes while the trucks and motors were scrapped.



Above: Car 4 operating on the "East Side" line. (Wayne C. Olsen collection)

Poor's Manual of Public Utilities 1913-1914

GRAND FORKS STREET RY.—State University to Lincoln Park, 4.5 m.; Great Northern Depot to State Fair Grounds, 2.5 m.; to East Grand Forks, 1.5 m.—total, 8.5 miles. Gauge, 4 ft. 8½ in. Rail (T), 56 and 60 lbs. Passenger cars (motor, 9; trail, 4), 13; service, 1; electric motors, 23; h. p., 705. Power purchased from Red River Power Co.

History.—Chartered in 1909, under the laws of North Dakota for thirty years. Road first opened in 1909; extended in 1910 and 1911. Franchise extends to 1939. Purchased equipment of Grand Forks Transit Co., and operates it as part of the general service.

Operations, year ended June 30, 1913.—Revenue car mileage—passenger, 249,560 miles. Passengers carried, 928,830. Earnings—passenger, $43,654; other, $361—total, $44,015. Operating expenses—maintenance of way and structures, $1,683; maintenance of equipment, $3,005; traffic expenses, $178; transportation expenses, $23,319; general expenses, $3,752—total, $31,937. Net earnings, $12,078. Deductions: Taxes, $960; interest on bonds, $873; dividends on common stock (6 p. c.), $9,000—total deductions, $10,833. Surplus for year, $1,245.

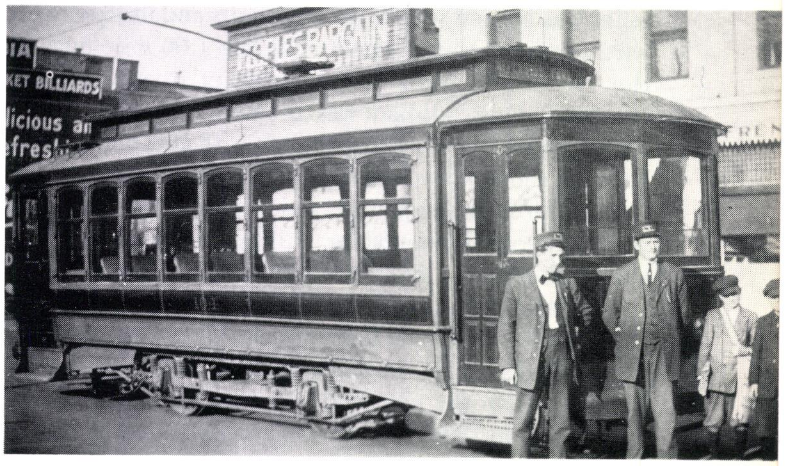
Profit and Loss Account, year ended June 30, 1913.—Surplus, June 30, 1912, $2,147; surplus for year ended June 30, 1913 (as above), $1,245—total surplus, June 30, 1913 (as per general balance sheet below), $3,392.

General Balance Sheet, June 30, 1913.—Capital stock, $150,000; funded debt, $14,555; working liabilities, $26,685; accrued liabilities, $1,689; appropriated surplus, $2,147; profit, $1,245—total liabilities, $196,321. **Contra:** Property investment, $191,993; cash, $4,328—total assets, $196,321.

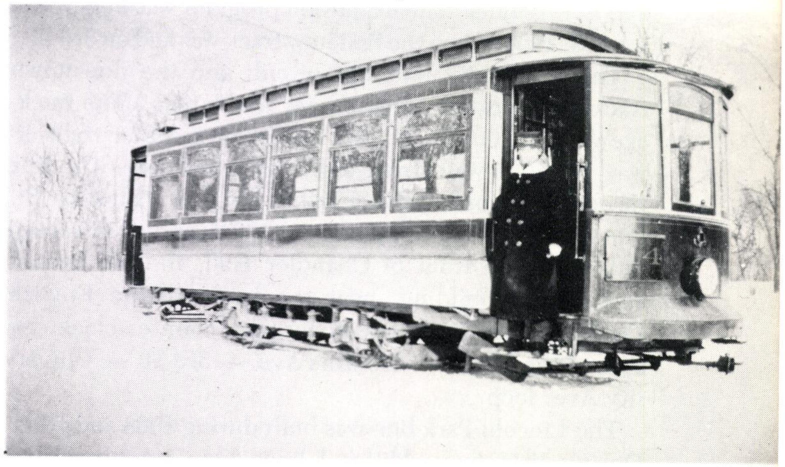
Capital Stock.—Authorized, $150,000; outstanding, $144,775. Shares, $100. Annual meeting, second Tuesday in January, at Grand Forks, N. D. Registrar and transfer agent, secretary of the company. Dividends of 6 p. c. per annum were paid from 1910 to 1913, inclusive. Books close fifteen days before and re-open one day following annual meeting and payment of dividends.

Funded Debt authorized and outstanding, June 30, 1913: $14,555 1st mtge. 6 p. c. bonds, dated June 1, 1906, due June 1, 1914; interest annually, June 1.

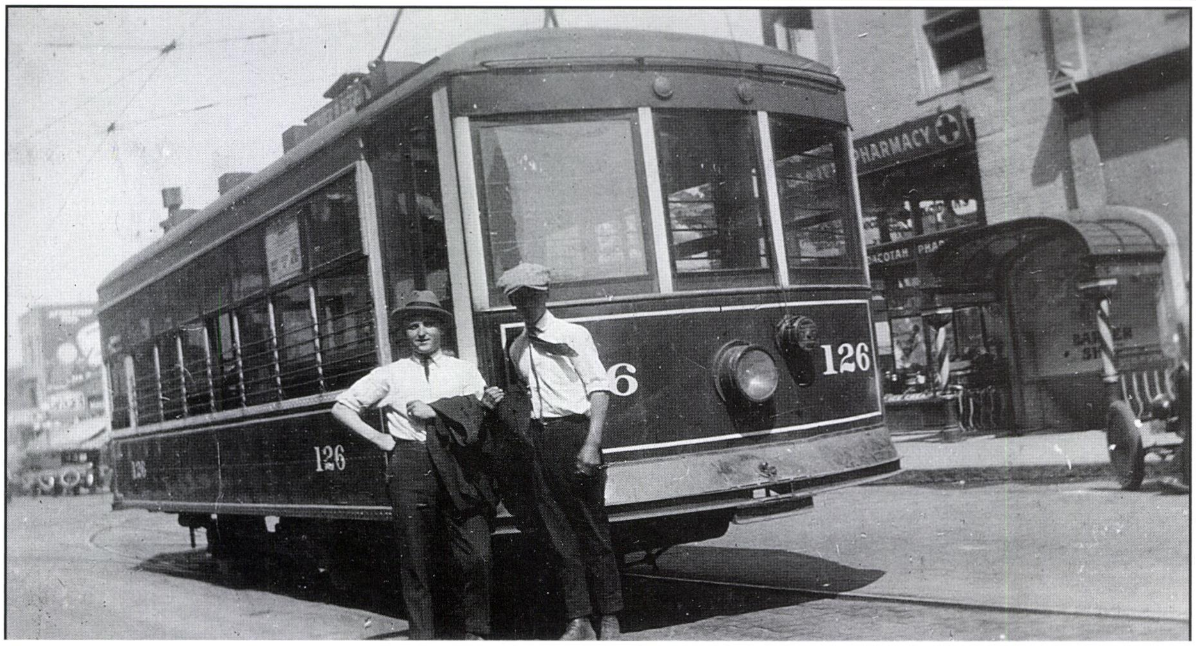
Directors.—R. B. Griffith, O. A. Webster, James Dinnie, A. I. Hunter, W. H. Kelsey, Thos. D. Campbell, D. H. Beecher, Leslie Stinson, J. D. Bacon, E. J. Landes, O. S. Hanson, Grand Forks, N. D. **Officers:** R. B. Griffith, Pres.; J. D. Bacon, Vice-Pres.; A. I. Hunter, Treas.; O. A. Webster, Sec.; Thos. Roycraft, Gen. Mgr., Grand Forks, N. D. Office, Grand Forks, N. D.

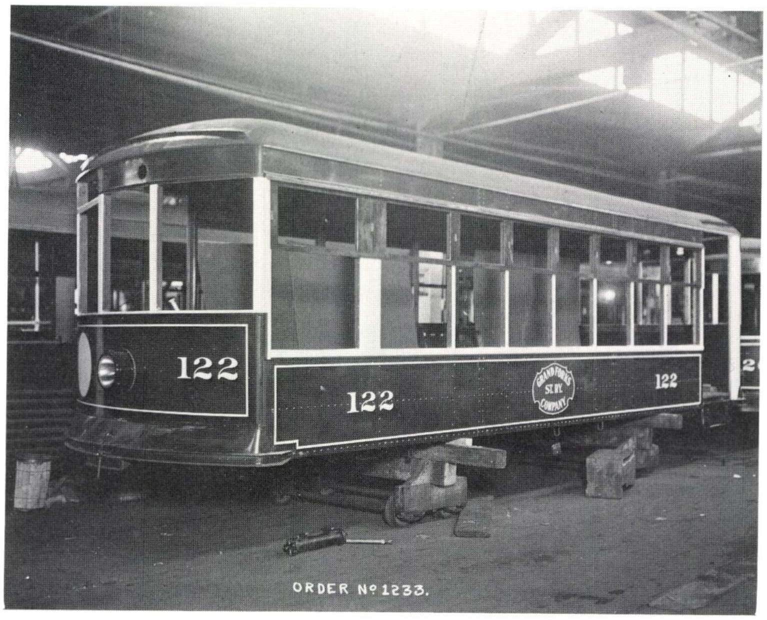


Center: Car 104 in downtown Grand Forks on the "Riverside Park" line. (Joe Hutchinson collection)



Car 114 at an unidentified location. (Joe Hutchinson collection)


PHARMACY
DACOTAH PHAR
126
126
126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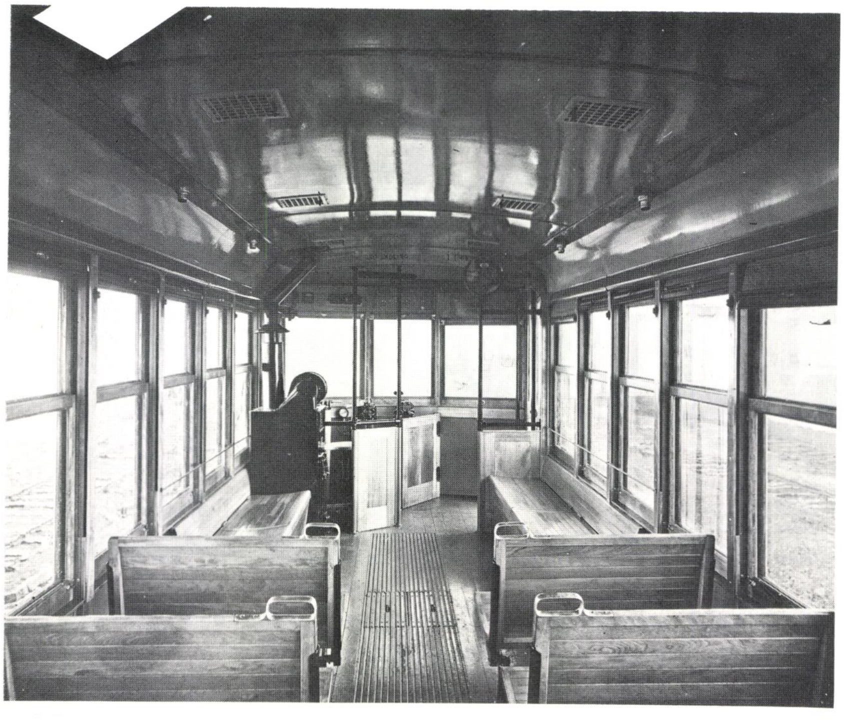
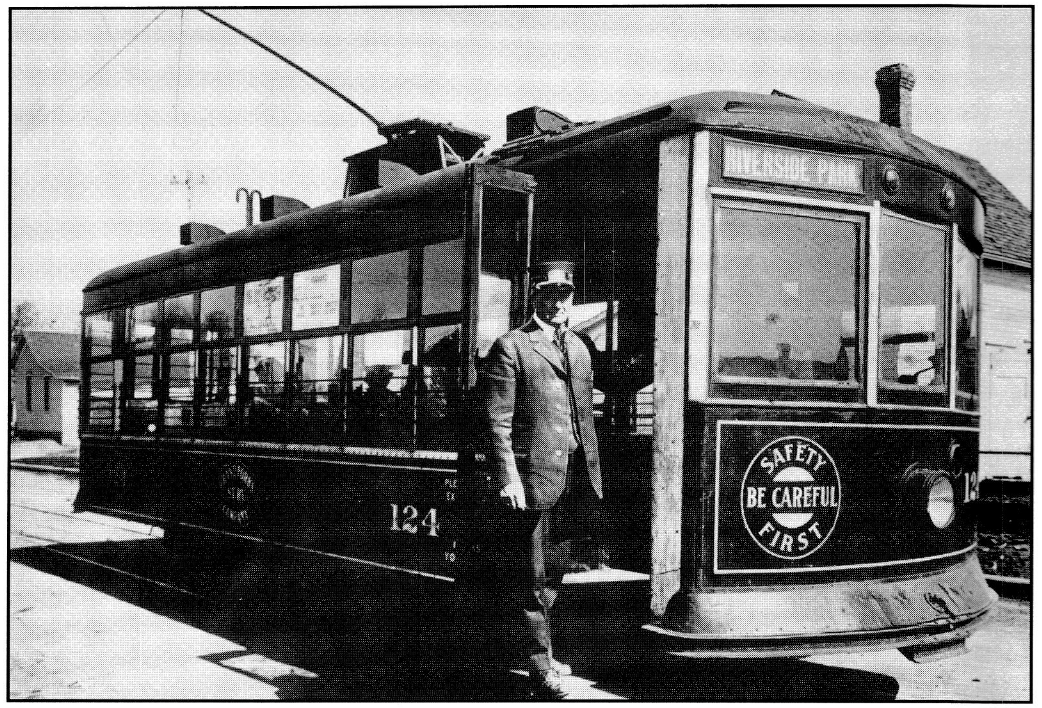
122
GRAND FORKS ST. RY. COMPANY
122
ORDER No 1233.



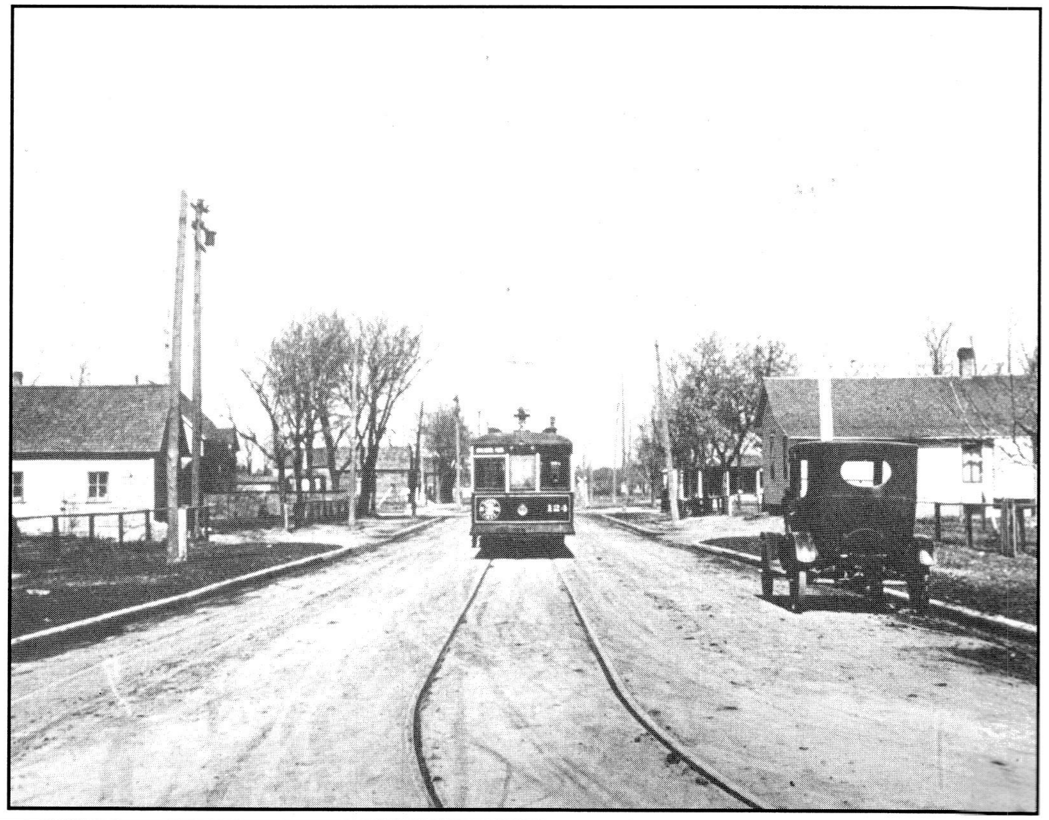
GRAND FORKS STREETCARS

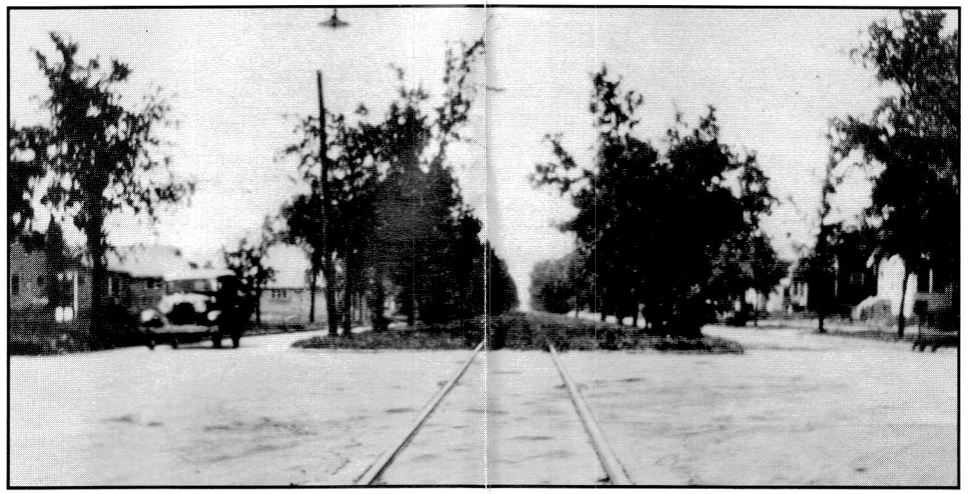
Russ Olson's book, The Electric Railways of Minnesota, contained chapters on all the state's small city systems. Since then the Editor has visited some of these places and found previously unpublished photos. Rather than duplicate the ERM text, this and future articles will reproduce the ERM map, along with the new photos. Apologies for the photo quality, which sometimes isn't very good. All photos are from the North Dakota State University collection.



Car #124 on the Riverside Park line about 1921. The motorman is George Glass.

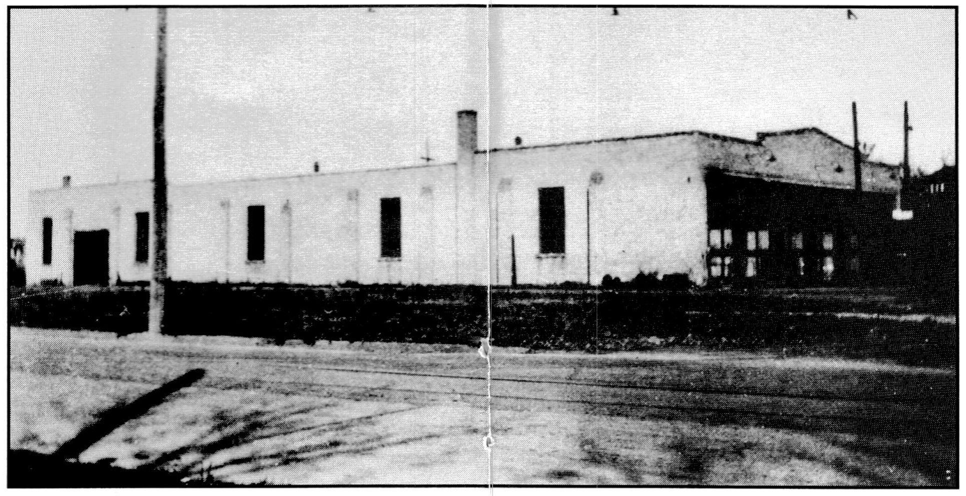
Car #124 on the Riverside Park line, turning onto North First Street about 1921.

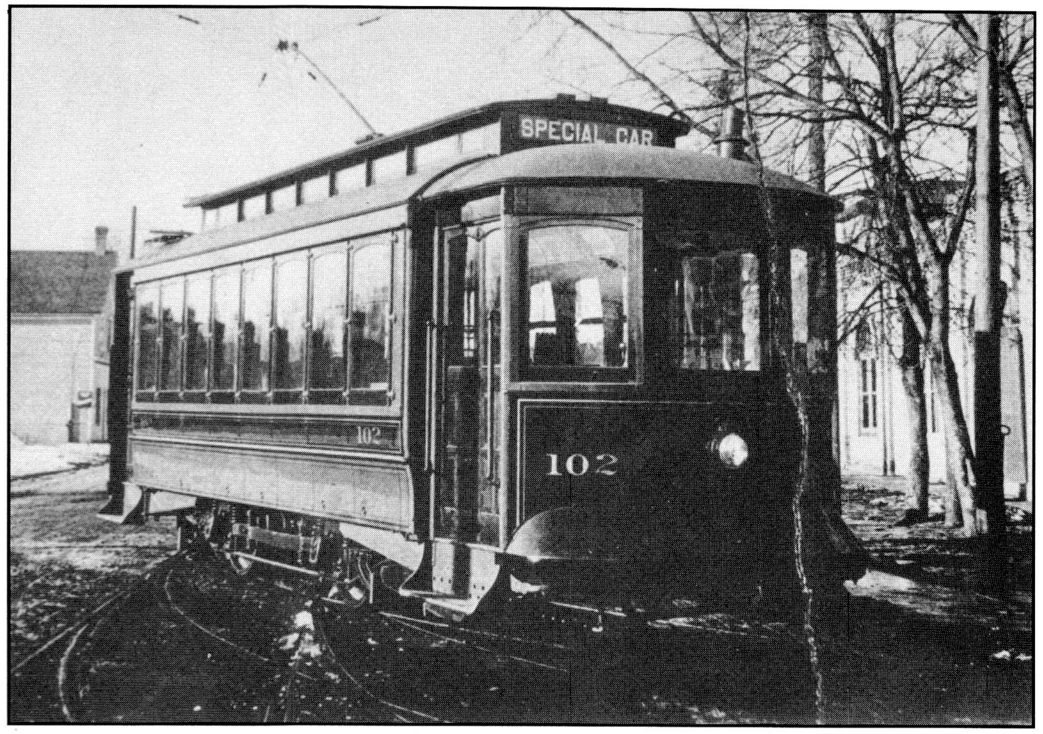




Private right of way on University Ave.

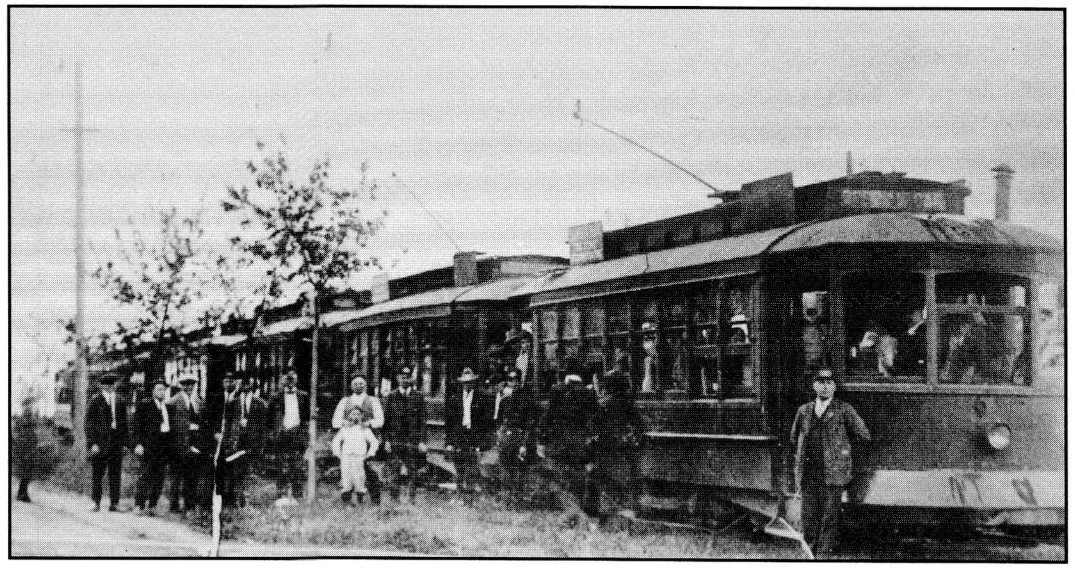
The carbarn, shown in the early 1930's.

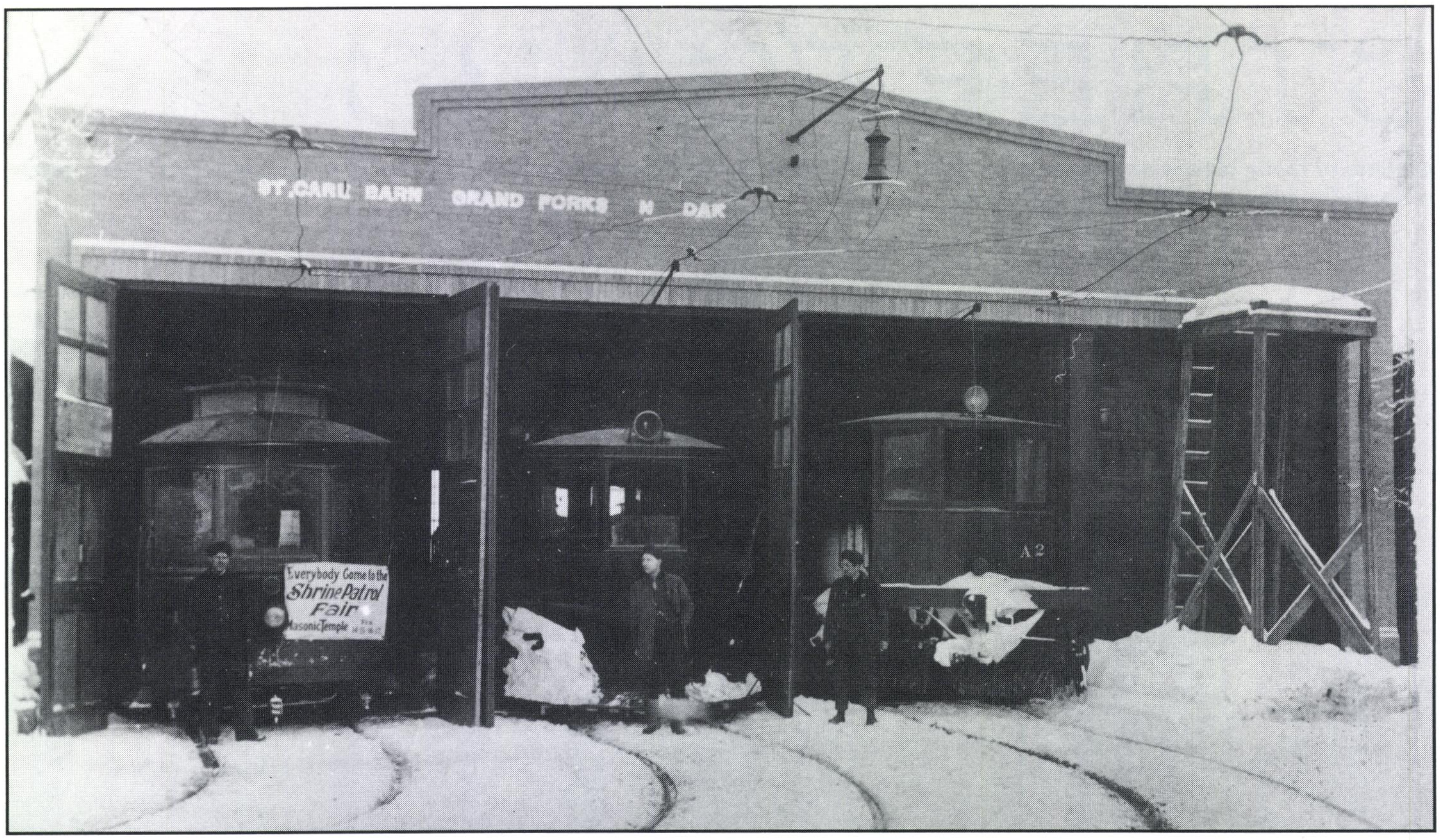




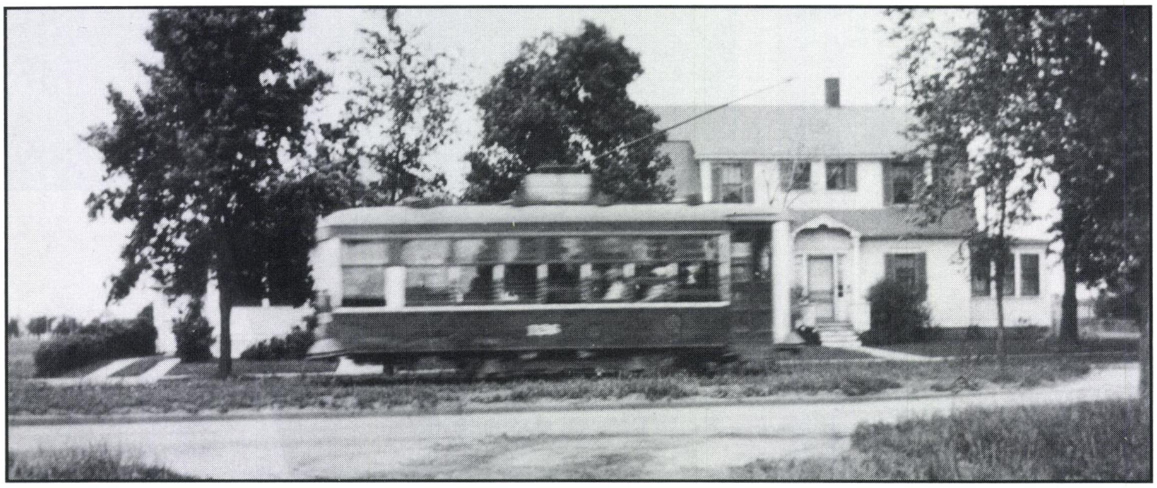
Car #102, probably at the carbarn.

A lineup of cars waiting to transport the crowd from a football game at the University of North Dakota, about 1915.

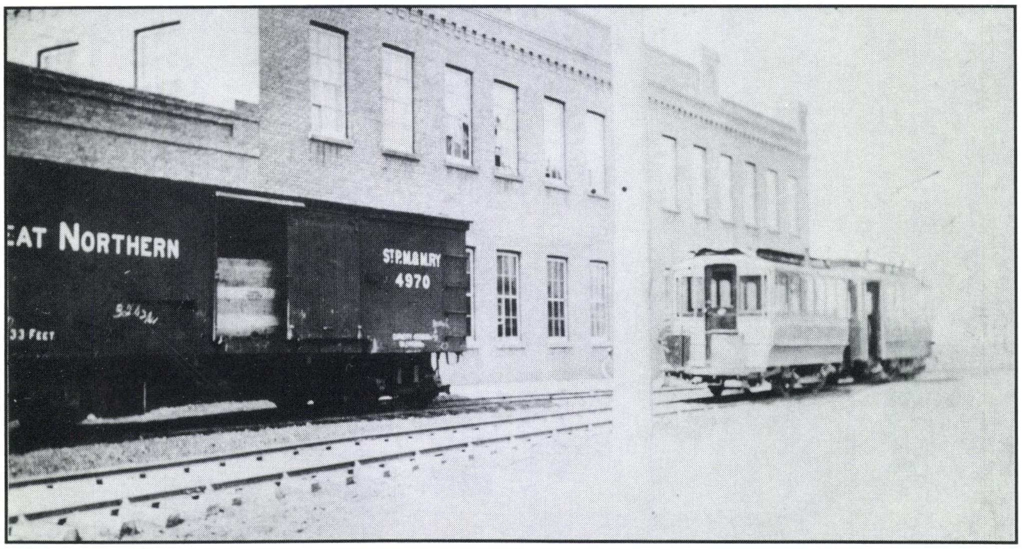



ST. CAR BARN GRAND FORKS N DAK
Everybody Come to the Shrine Patrol Fair Masonic Temple
A2

Equipment poses at the carbarn. Left to right are a streetcar, a snowplow and sweeper #A2. At right appears to be a tower car for maintaining the overhear wire, similar to the one in use at Lake Harriet.

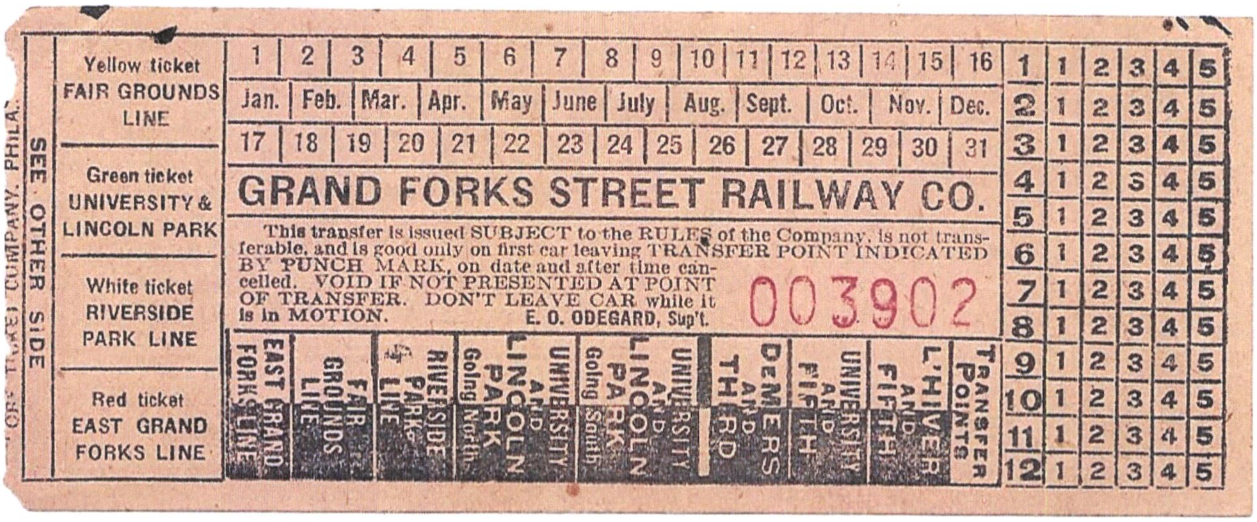


A Birney on the University line.



The first electric streetcar poses with a trailer, probably a former horsecar, in 1904. Note the boxcar marked for the St. Paul Minneapolis & Manitoba Ry.

NOTE



TICKET COMPANY. PHILA.

SEE OTHER SIDE

Yellow ticket
FAIR GROUNDS LINE

Green ticket
UNIVERSITY & LINCOLN PARK

White ticket
RIVERSIDE PARK LINE

Red ticket
EAST GRAND FORKS LINE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.				
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	

GRAND FORKS STREET RAILWAY CO.

This transfer is issued SUBJECT to the RULES of the Company, is not transferable, and is good only on first car leaving TRANSFER POINT INDICATED BY PUNCH MARK, on date and after time cancelled. VOID IF NOT PRESENTED AT POINT OF TRANSFER. DON'T LEAVE CAR while it is in MOTION.

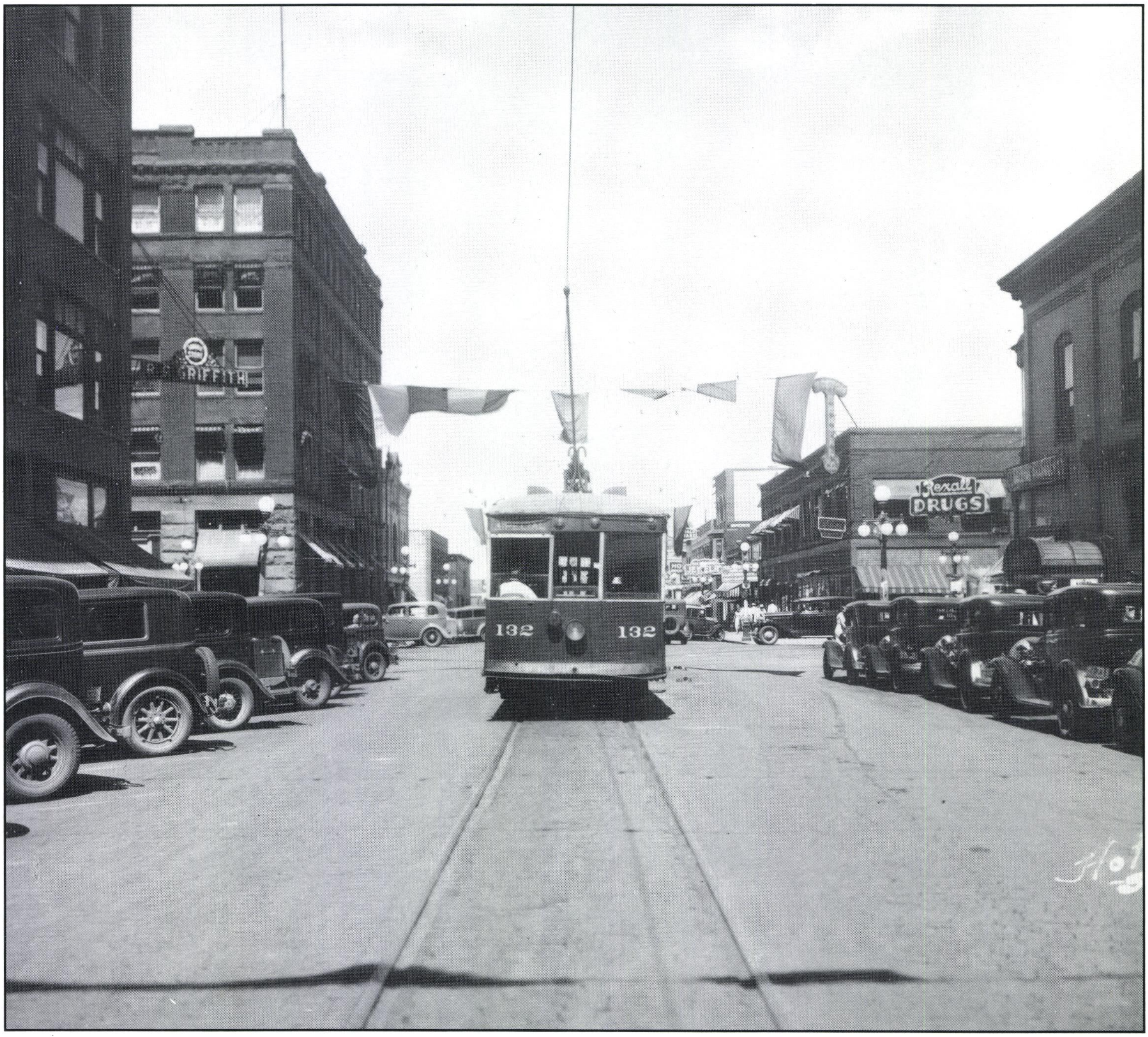
E. O. ODEGARD, Sup't.

003902

- EAST GRAND FORKS LINE
- FAIR GROUNDS LINE
- RIVERSIDE PARK LINE
- UNIVERSITY AND LINCOLN PARK Going North
- UNIVERSITY AND LINCOLN PARK Going South
- DeMERS AND THIRD
- UNIVERSITY AND FIFTH
- L'HIVER AND FIFTH
- TRANSFER POINTS

1	1	2	3	4	5
2	1	2	3	4	5
3	1	2	3	4	5
4	1	2	3	4	5
5	1	2	3	4	5
6	1	2	3	4	5
7	1	2	3	4	5
8	1	2	3	4	5
9	1	2	3	4	5
10	1	2	3	4	5
11	1	2	3	4	5
12	1	2	3	4	5

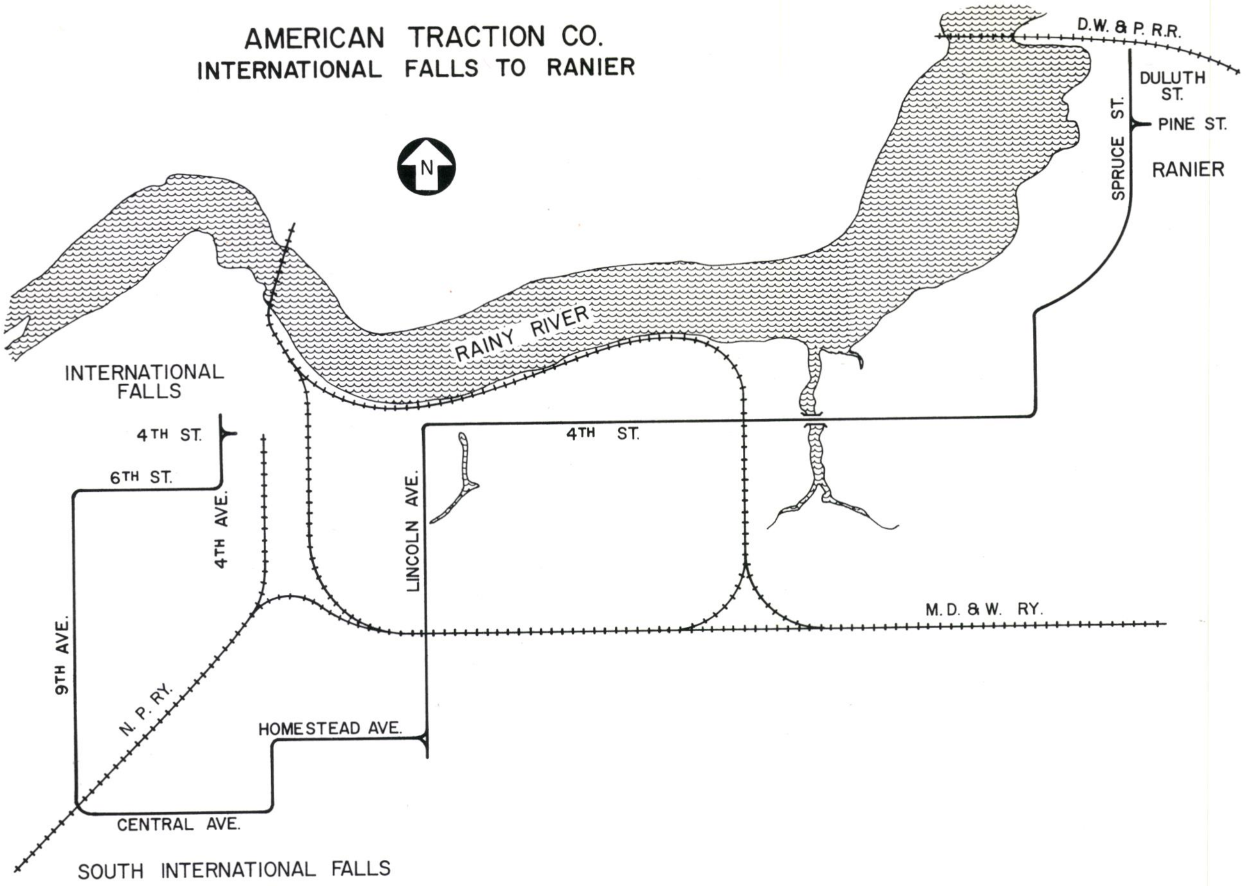
GRAND FORKS, N.D.



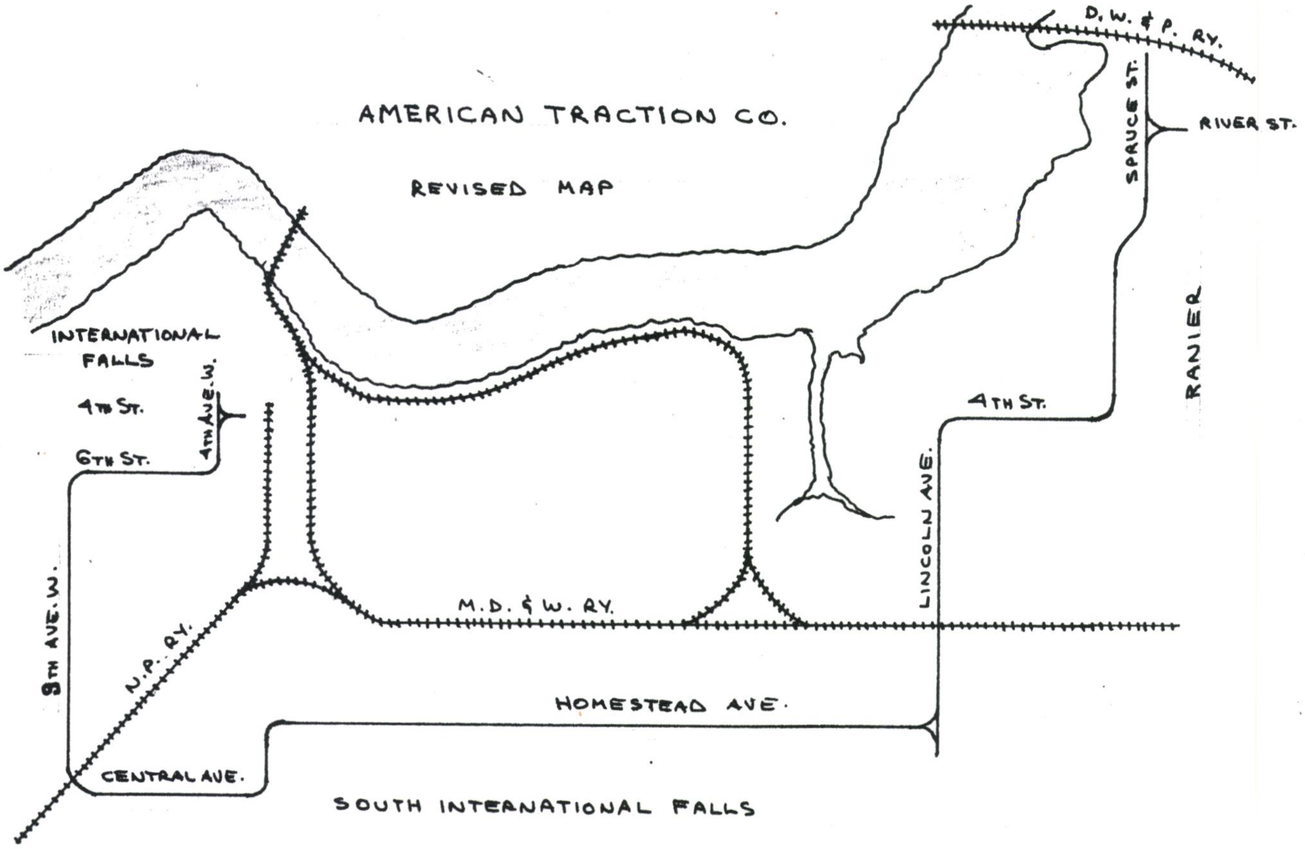
ON DEMERS AVE. 7-1-1934 LAST DAY OF SERVICE

AMERICAN TRACTION COMPANY

AMERICAN TRACTION CO.
INTERNATIONAL FALLS TO RANIER


N
D.W. & P. R.R.
DULUTH ST.
SPRUCE ST.
PINE ST.
RANIER
RAINY RIVER
INTERNATIONAL FALLS
4TH ST.
6TH ST.
4TH AVE.
4TH ST.
LINCOLN AVE.
M.D. & W. RY.
9TH AVE.
N. P. RY.
HOMESTEAD AVE.
CENTRAL AVE.
SOUTH INTERNATIONAL FALLS

AMERICAN TRACTION CO.
REVISED MAP


D.W. & P. RY.
SPRUCE ST.
RIVER ST.
RANIER
INTERNATIONAL FALLS
4TH ST.
4TH AVE. W.
6TH ST.
4TH ST.
LINCOLN AVE.
M.D. & W. RY.
9TH AVE. W.
N.P. RY.
HOMESTEAD AVE.
CENTRAL AVE.
SOUTH INTERNATIONAL FALLS

AVERY® PV119ED

AMERICAN TRACTION COMPANY

International Falls - Ranier

1911 - 1918

International Falls developed into an early lumbering center. Its 1910 population was 1,487 persons. During 1909 a group of Iowa and South Dakota bankers formed the American Suburbs Company to promote the sale of real estate. A bank was established in Ranier to facilitate the promotion. A subsidiary, American Tramways Company, was incorporated in South Dakota during 1909 to construct a street railway connecting the Duluth, Winnipeg & Pacific Ry. depot in Ranier with the Northern Pacific Ry. depot in International Falls. Necessary franchises were obtained during 1910 and in November of that year it was announced that the line would probably use Edison storage battery cars.

Construction began in Ranier with the intention of building directly into International Falls on 4th Street. However when track laying began within the city limits of International Falls during June 1911 and near the Minnesota & Ontario Paper Co. sawmill, the company was taken into court. The E. W. Backus interests, International Lumber Co., sued on the grounds that construction of the track would interfere with the sawmill operations and pose a hazard crossing the Minnesota, Dakota & Western Ry. yards further west on 4th Street.

The first car arrived in July 1911. A newspaper photograph shows it to be a gasoline-mechanical car with a [redacted] semi-convertible body. [redacted]

Meanwhile the court case became complicated and eventually ended in the Minnesota Supreme Court. The final verdict was that while the objections to the line were not completely valid, there were a number of careless errors in the original franchises granted by the respective towns to the car line company. One of these errors was that the company was given the right to operate both passenger and freight service in contradiction to a Minnesota law prohibiting a street railway from performing freight operations. After this irregularity and others were revealed by the court in August 1912 a new company appeared on the scene seeking the franchises.

This company, American Traction Company, was also a real estate promotion adjunct. It was organized by L. H. Nord, an International Falls resident, in cooperation with L. L. Enger, Minneapolis, both jointly involved in the International Falls Realty Co. It was incorporated in Maine during September 1912 and authorized to do business in Minnesota during December 1912. A. L. Sortor, Minneapolis, became president of the company in 1913. During January 1913 the company, friendly with the Backus interests, received the proper franchises and in July of that year purchased all the property and rights of the American Suburbs Co. and American Tramways Co. With regard to the car line this involved 5.50 miles of track and one passenger car.

The track on 4th Street in International Falls was removed and relocated directly south from Ranier to South International Falls. The advantage of this new route was that it served more people in terms of where they lived. The disadvantage was that it was not competitive with the direct International Falls-Ranier service provided by boats and "buses".

(In February 1914 A. L. Sortor, on behalf of the American Traction Co., was seeking a franchise to build and operate a streetcar line in Faribault, Minnesota.)

Construction of the relocated line proceeded slowly, so slowly that the first operation did not take place until September 20, 1916, over the 6.75 miles of track which had been inspected by the Minnesota Railroad & Warehouse Commission that same day. A carhouse was built at the Ranier wye.

A gasoline-mechanical car had been purchased in May 1916 from the Charles City Western Ry., Charles City, Iowa. This car was CCW #5. It had been built by St.Louis Car Co. in 1892 as one of five 24 ft. closed trailers (numbers 1-5) for the Fort Clark St. Ry., Peoria, Illinois, which was subsequently acquired by the Peoria Railway. The five trailers were acquired by the CCW in July 1910 retaining the same numbers. They were all rebuilt to gasoline-mechanical cars by the CCW Ry. #5 received a Hart-Parr 30 h.p. gasoline engine in the process.

One real estate investor moved to International Falls as a result of his purchase. He reported lots were offered at $500 each, some of which were under water as much of the line ran through swampland. He considered the gasoline-mechanical car as "a pile of old junk". (These cars were considered a total "flop" on the CCW.)

One new storage battery car was acquired from the Railway Storage Battery Co. of Silver Lake, New Jersey. Edison alkaline nickel-iron batteries were used. This car arrived July 3, 1917. The investor previously mentioned reported ~~tht~~ that the batteries had to be recharged after each trip.

A timetable dated July 1917 was printed in the local newspaper.

Leave Ranier	Leave International Falls
1:50 a.m.	2:15 a.m.
6:30 a.m.	7:15 a.m.
11:30 a.m.	1:10 p.m.
3:00 p.m.	4:15 p.m.
5:10 p.m.	6:15 p.m.
7:00 p.m.	10:30 p.m.

The company announced they expected to add a seventh round trip within a short time. Additional cars would be put on and more numerous trips made as the patronage increased.

George R. Wiar of Ranier was the local manager and conductor, with Ray Holler as motorman. Later in 1917 R. B. Kook, an International Falls merchant, was appointed general manager. The local newspaper reported in December 1917 that the company was having trouble recharging the batteries. Apparently the Ranier power plant was inadequate to handle the winter power load of the community plus recharging the car's batteries.

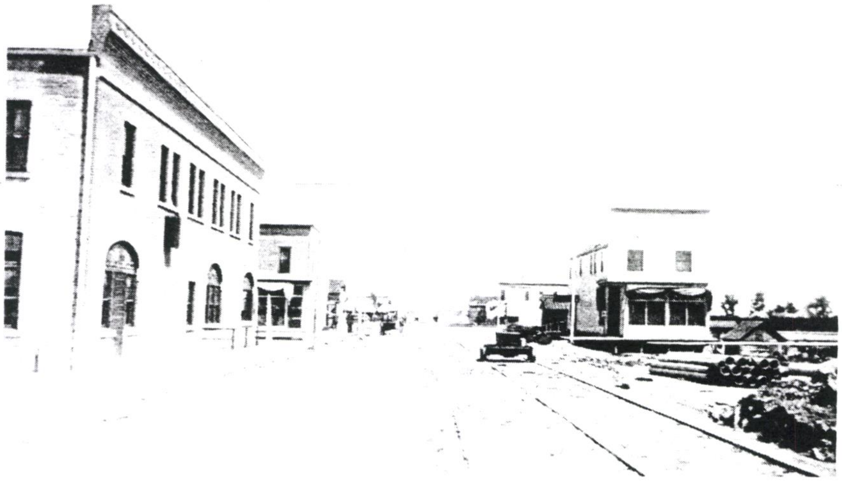
The July 1918 McGraw Electric Railway List contained information with a reporting date of December 1917. Connects International Falls, South International Falls, Ranier and St.Francis, Ontario. Office, 340-346 Security Building, Minneapolis. 6.75 miles of track. Two gasoline cars, one Edison storage battery car and nine other cars. President A. L. Sortor, Minneapolis; Vice Presidents Charles M. Andrist and L. L. Enger, Minneapolis; Secretary & Treasurer L. H. Nord, International Falls; Auditor George R. Wiar, Ranier; General Manager R. B. Kook, International Falls. (Electrification contemplated.)

A timetable printed in the 2-7-1918 newspaper was not much different than the earlier timetable.

Leave Ranier	Leave International Falls
1:45 a.m. (meets the Duluth train)	2:15 a.m.
8:15 a.m.	9:30 a.m.
11:30 a.m.	1:00 p.m.
2:15 p.m.	3:30 p.m.
5:10 p.m. (meets the Duluth train)	6:15 p.m.
7:30 p.m.	10:00 p.m.

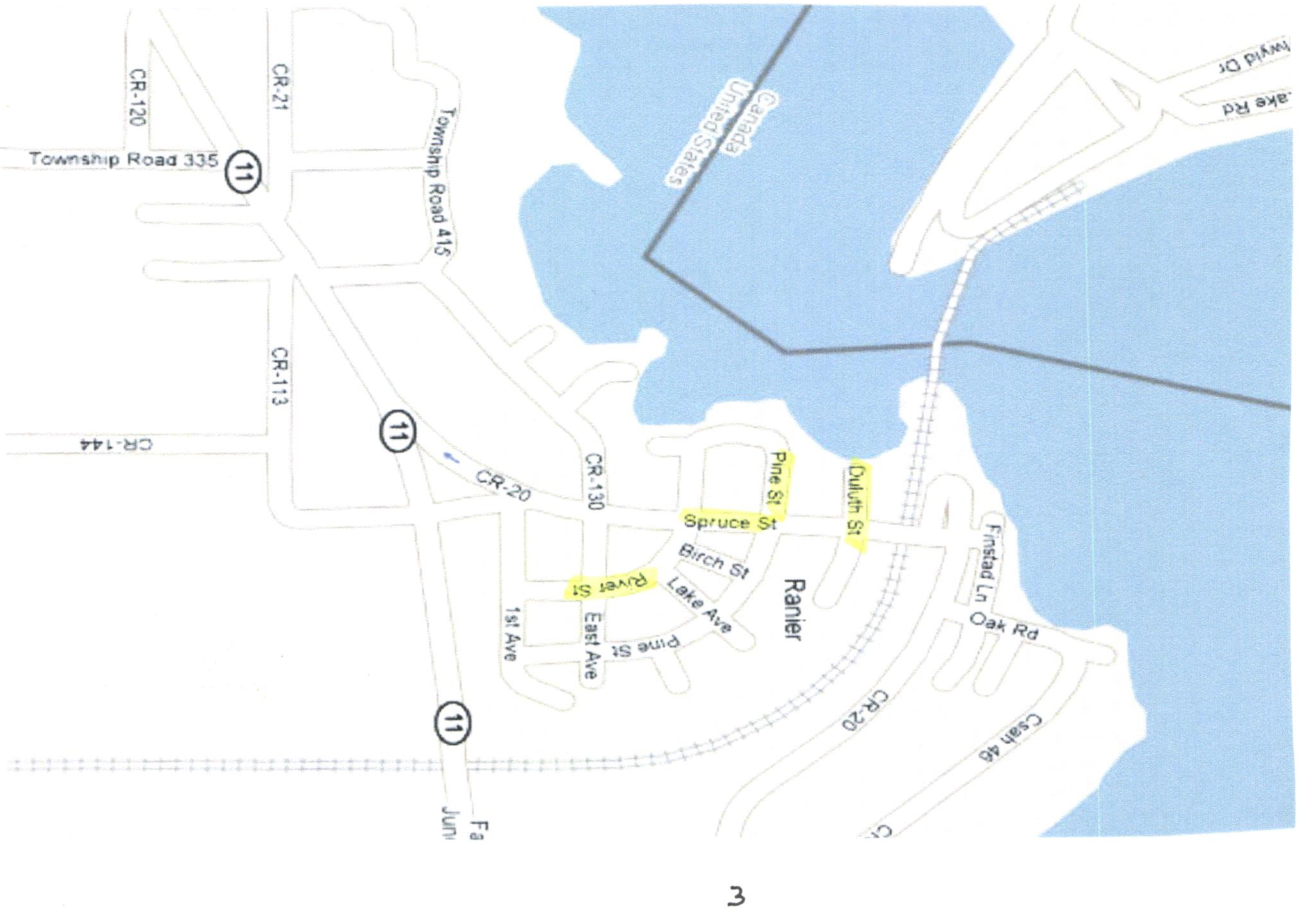
An elderly resident recalled that when he returned to International Falls from World War I military service in the fall of 1918 the line had already stopped running. The Minnesota Railroad & Warehouse Commission records indicate an International Falls Street & Interurban Ry. was operating the line in 1920, but other records in their files list the line as being abandoned about 1919 or 1920.

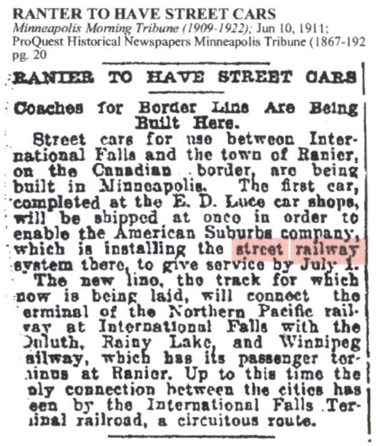
One carbody was sold and used for several years for an unstated purpose near the Ranier wye. The carhouse was moved to the river front for use as a boat house. It was still there in the mid 1980's although considerably altered over the years.



Ranier main street. L-R: bank, beer wagon, Erickson store (background L), which operated 1907-1978, Ranier Hotel (center R). Note street car tracks, ca. 1916. (Marie Westermeyer Teufer)

In 1919 the county purchased the company's two bridges and moved them to the highway, which paralleled the streetcar line. The city and county both brought action against the company in 1922 for the expense of removing the track and putting the streets back into condition.


CR-120
CR-21
Township Road 335
11
Township Road 415
Canada
United States
wild Dr
ake Rd
CR-113
CR-144
11
CR-20
CR-130
Pine St
Duluth St
Spruce St
Birch St
River St
Lake Ave
Ranier
1st Ave
East Ave
Pine St
Finstad Ln
Oak Rd
CR-20
Csah 46
11
Fa
Jun



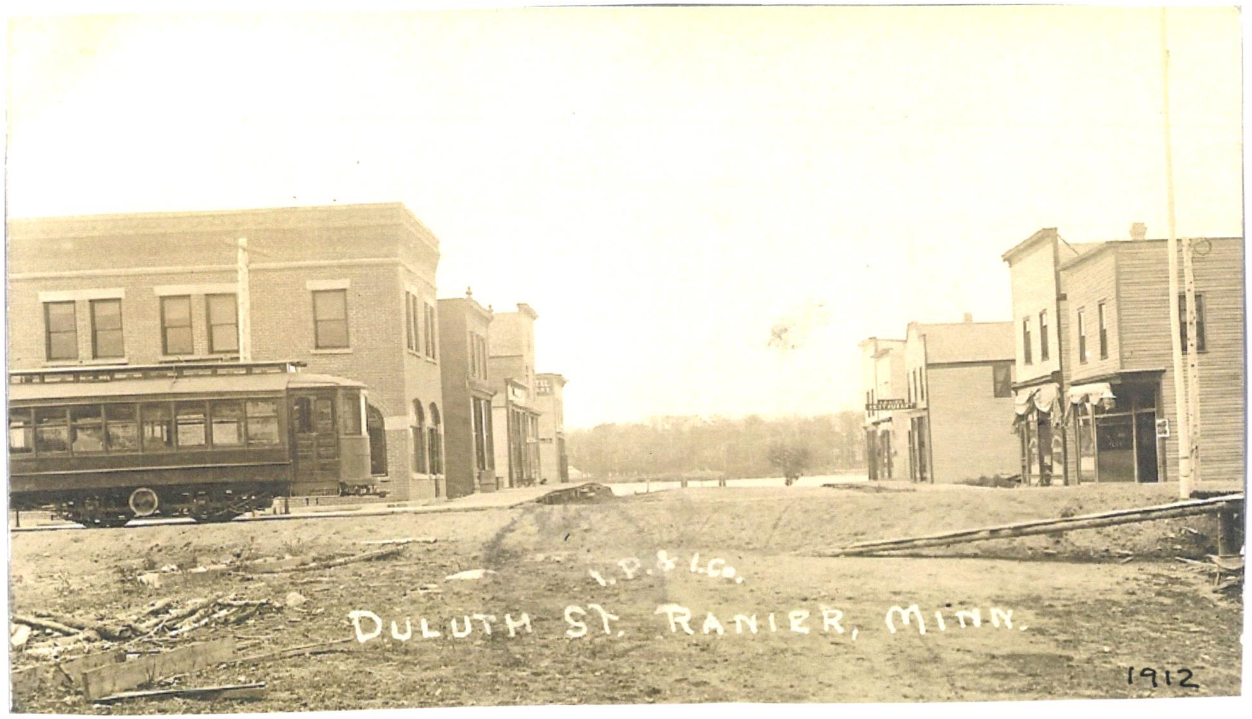
RANTER TO HAVE STREET CARS
Minneapolis Morning Tribune (1909-1922); Jun 10, 1911;
ProQuest Historical Newspapers Minneapolis Tribune (1867-192
pg. 20

RANIER TO HAVE STREET CARS

Coaches for Border Line Are Being Built Here.

Street cars for use between International Falls and the town of Ranier, on the Canadian border, are being built in Minneapolis. The first car, completed at the E. D. Luce car shops, will be shipped at once in order to enable the American Suburbs company, which is installing the street railway system there, to give service by July 1.

The new line, the track for which now is being laid, will connect the erminal of the Northern Pacific railvay at International Falls with the Duluth, Rainy Lake, and Winnipeg ailway, which has its passenger terminus at Ranier. Up to this time the only connection between the cities has een by the International Falls Terminal railroad, a circuitous route.

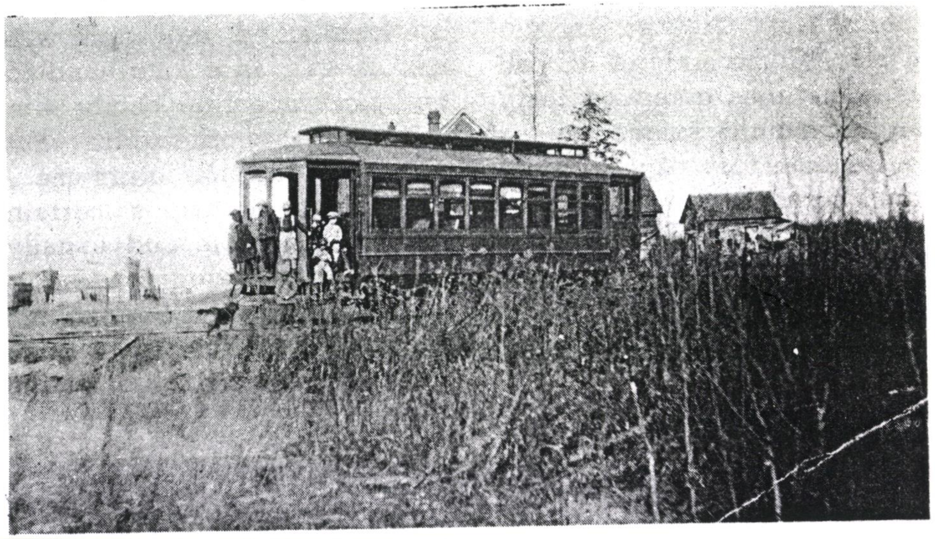


The Ranier trolley car is a better memory around here than it was successful transportation. Some who rode it between this village and International Falls recall that occasionally they had to help push it, too. Eventually it stopped running and stood for years just off the east spur of Duluth Street (which is that flat place between the United States Postal Service Station and the Village Saloon).

One of its customers noted on the reverse side of this 1916 photograph "It didn't work too well or long, but they *tried*."

And that's the secret of everything that *did* work around here.

Photograph from Clara Finstad



9-14-1907

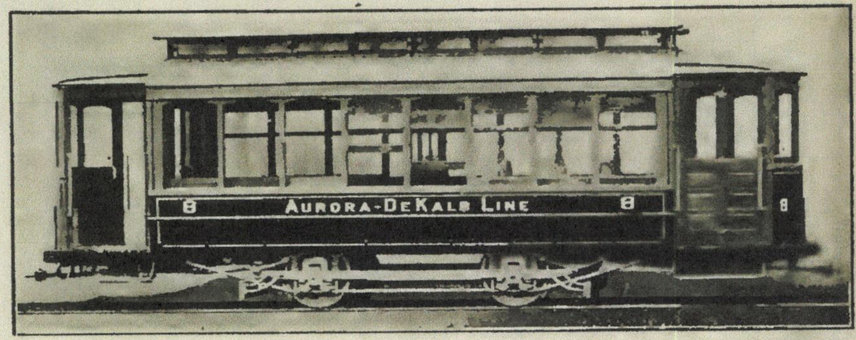
appears to be the type
of car used in
International Falls

GASOLINE CARS ON THE AURORA-DE KALB LINE.

The G. C. Kuhlman Car Company, Cleveland, has recently furnished some semi-convertible cars to the Aurora De Kalb & Rockford Railway Company. These cars are driven by the gasoline engines built by P. H. Batten & Co., Harvey, Ill.

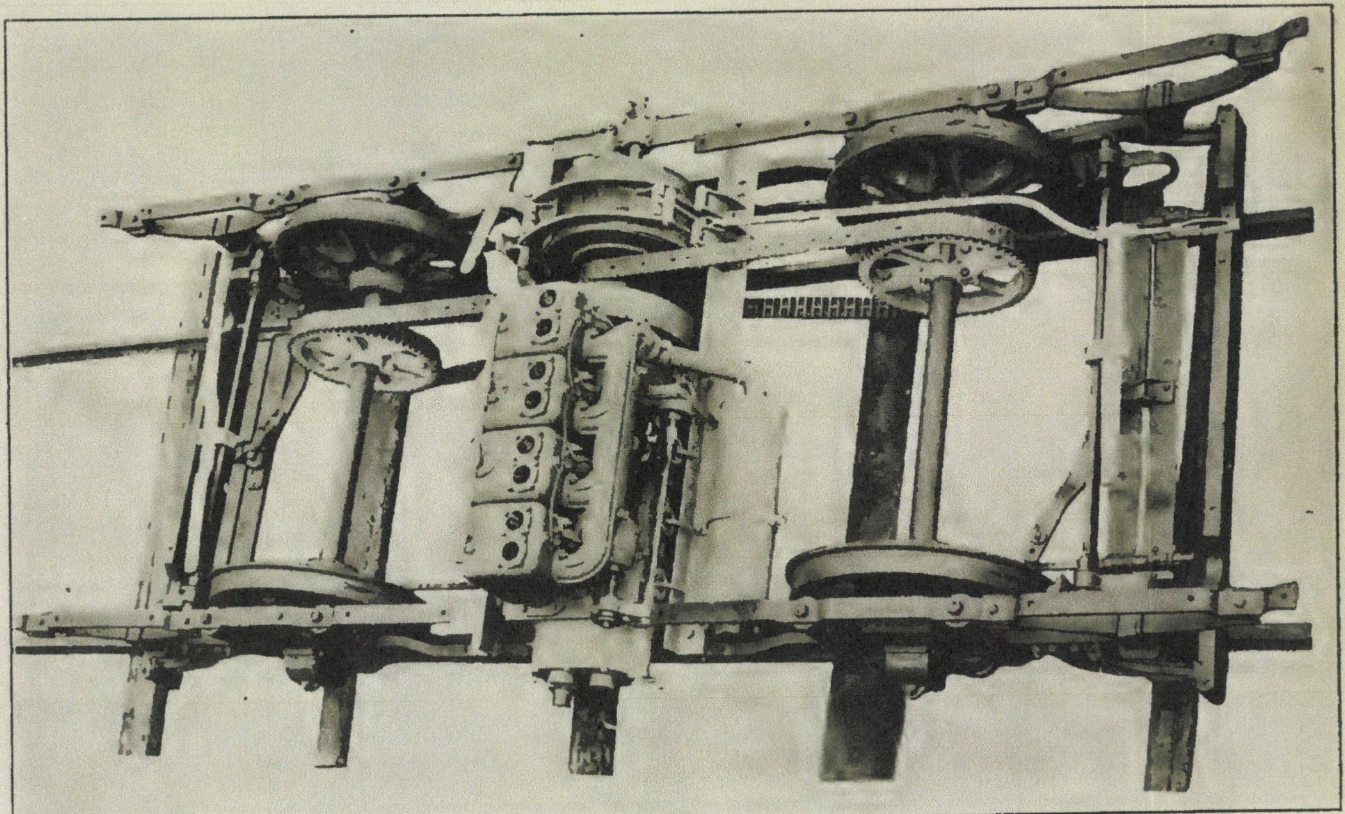
The cars are 8 feet 2 inches wide, 20 feet 8 inches over corner posts, and 36 feet over the vestibules. The smoking and baggage compartment is separated from the passenger compartment by a partition and swinging door at one side and cross seats against the partition cover the engine cylinders, which project above the floor level of the car about 14 inches.

The seating capacity of each compartment is 16 people, making a total of 32 seats, which, considering that cross seats are used, is large for a car of this length. As will be seen from the illustration the cars are vestibuled and are arranged for double-end operation. The engine controlling handles may be used at either end of the car. Brill 21E standard trucks are used, with 33-inch cast-iron wheels.



Aurora-De Kalb Gasoline Car—Exterior.

The power is generated by a 4-cylinder 4-cycle engine, having cylinders 7 by 7 inches. This engine is mounted on the truck frame midway between and parallel to the axles, thereby getting the benefit of the coil springs on the truck. As the engine is fastened to the truck at only three points any twisting and bending strains are not transmitted from the truck to the engine.



Aurora-De Kalb Gasoline Car—Engine and Truck.

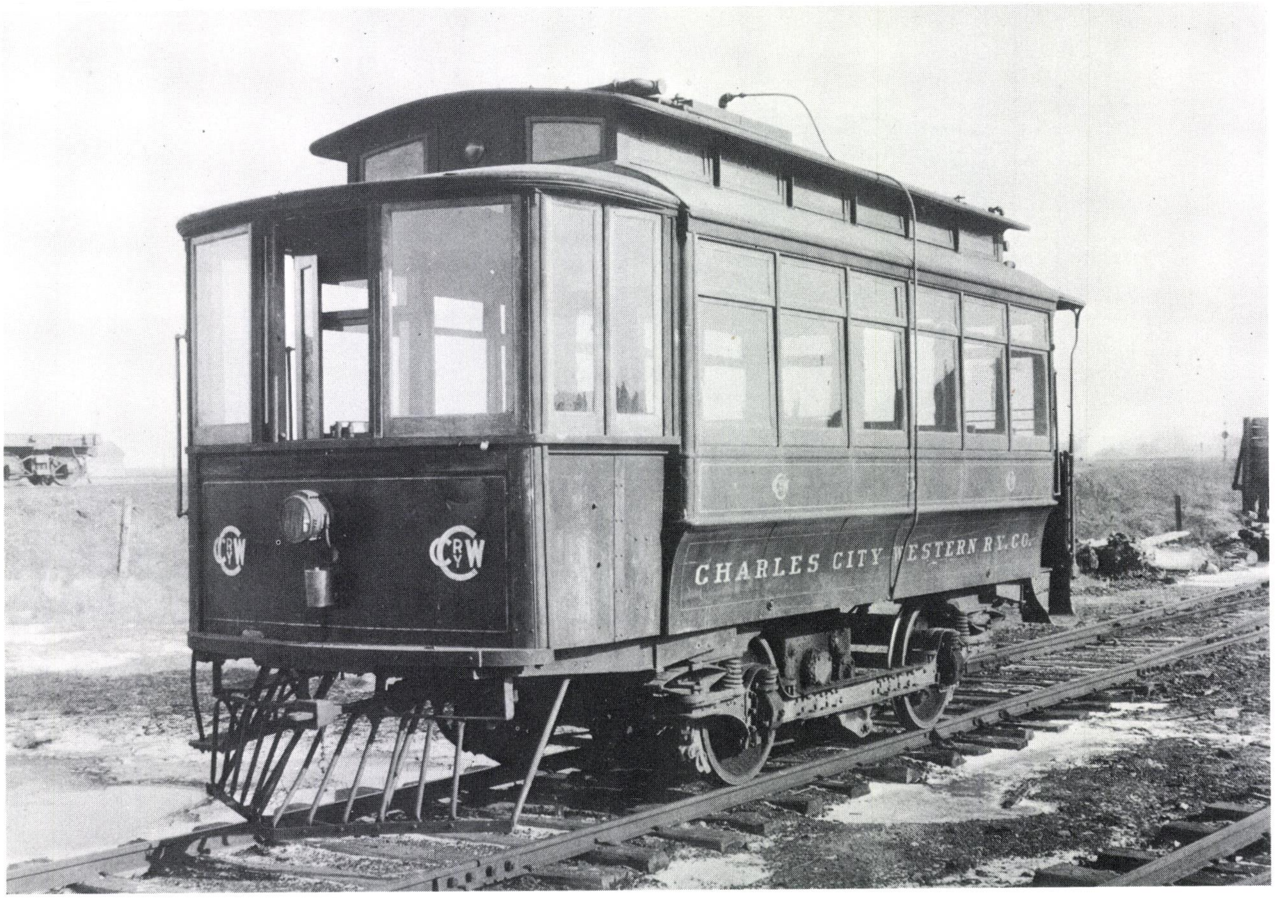
The engine drives a planetary transmission, which in turn drives two Morse silent chains, one to each axle. There are 29 teeth on the transmission gear and 61 on the axle gear. At 35 miles per hour the piston speed of the engine is only about 700 feet per minute. To take up the stretch of the chain the journals are cast with a thick lip on one side; this, with a wedge, allows for ¾ inch of slack in the chain; when this point is reached, by taking out a link the original adjustment is again made.

Lubrication is by force feed pump and a splash system, which is giving good results. Cooling water from the cylinder jackets passes to radiators in the dash at each end of the car vestibule. The circulation of the air is such that the car is well heated from the vestibules.

There are three controlling handles. On the controller are three points: slow, neutral and high speed. This handle is very similar to that on a hand brake. The other two levers for throttle and advancing the spark are similar to air brake handles. All three handles are easily detached and can be used on either end of the car. The engine is reversible and works equally well in either direction.

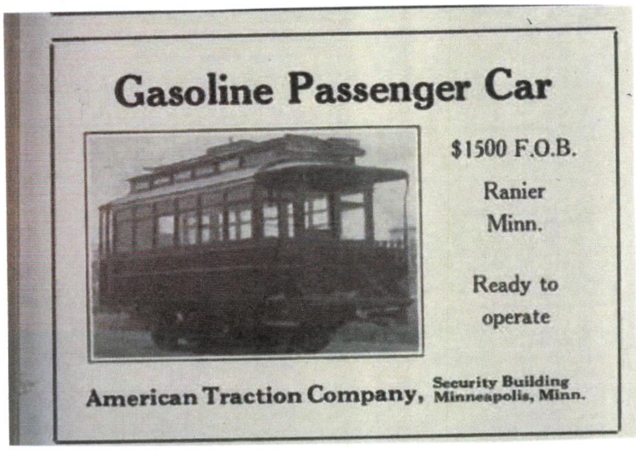
The weight of the engine and transmission is 3,000 pounds, and the completely equipped car weighs about 10 tons. The engine is rated at 60 horsepower and easily holds the schedule speed of 20 miles per hour, which necessitates a running speed of 30 miles per hour.

These cars are at present running 120 miles per day on about 20 gallons of ordinary stove gasoline.


CCW
CCW
CHARLES CITY WESTERN RY. CO.

ERJ

THIS AD
APPEARED
1-19-1918
2-9-1918
2-16-1918



Gasoline Passenger Car

$1500 F.O.B.
Ranier
Minn.

Ready to
operate

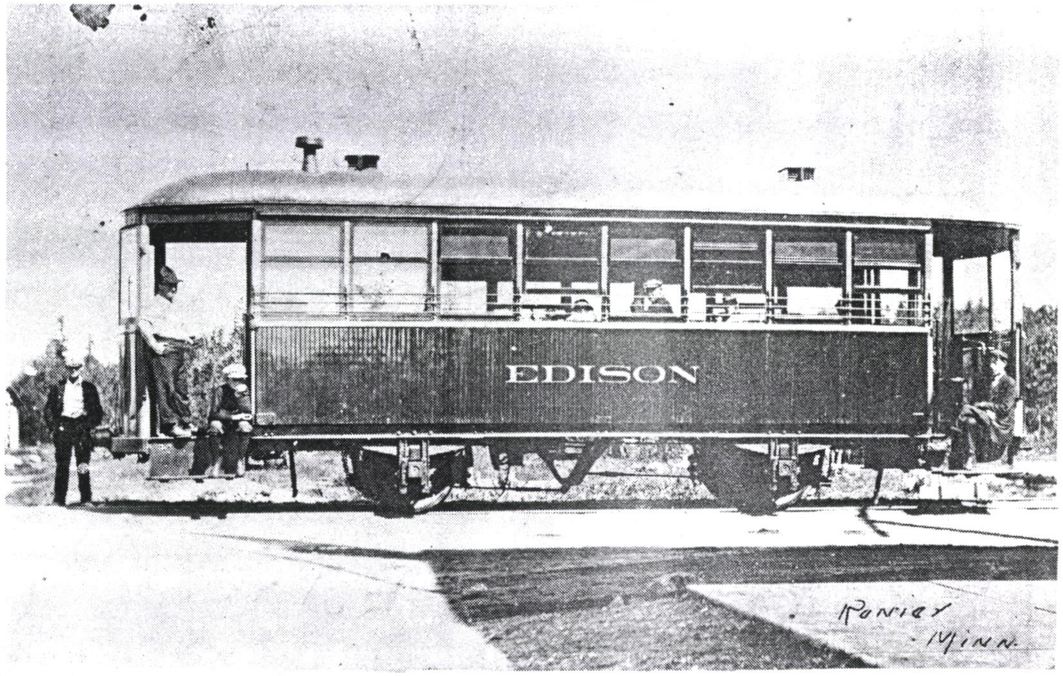
American Traction Company, Security Building
Minneapolis, Minn.

A Streetcar Named Despair

We continue the story of Grace Erickson, the story of the rough frontier town to which she came in 1912 as the bride of Harry Erickson, and where as mother, storekeeper and sometime postmaster and always a thoughtful and compassionate neighbor, she lived out her long and useful life of 90 years.

Last week we offered in her own words, as recorded eleven years ago by a pair of roving historians, her gentle philosophy that animals are aggressors only when provoked, despite her perilous encounter with a pastured bull who apparently considered her trespass of his pasture provocation enough to charge at her.

This week we offer, in Grace Erickson's own telling, a few of those little events that shape the character of a village like this:



THE RANIER STREETCAR: SOMETIMES IT WORKED.

They hadn't put the bridge up, the first time I was here, and they were dynamiting that rock cut down by the bridge. We had a room up here, and then we boarded with Mrs. Old Lady Coucher. She had a shack right by the railroad track and we used to go down there to eat.

One day we were coming for dinner, when they set off a blast of dynamite. The rocks flew all over. Mrs. Coucher wasn't in front of the stove—she had gone to the cupboard for something—and cussed, then he took off to find the boss, who came over and wondered were we badly hurt. I said, "Well, I'm not but I don't know what's the matter with the kid, I can't get him out from under the bed."

In those days there was no way to get to the Falls except we go by boat, and in the wintertime Pete Gibbon—he used to have a livery and used to bring in broncos—had a sled with a house built on it and a stove in to start it and then they bought another old battery outfit that every trip the batteries had to be charged.

The track was seven miles long running through all the swamps where they sold lots for five hundred dollars and some of them was under water. The promoters were Al Sorter and Senator Nord. No doubt they got the land for one dollar.

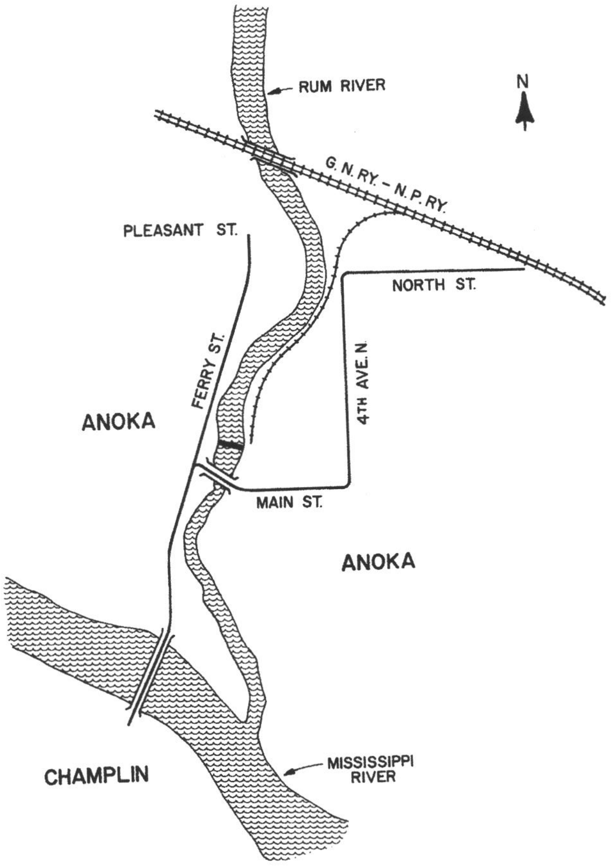
The Ranier trolley eventually came to rest more or less permanently at the Ranier turnaround, which was in the area of the present village saloon. Then it returned to the junkpile from which it had sprung fullblown to promote that ever-present sport of land promotion.

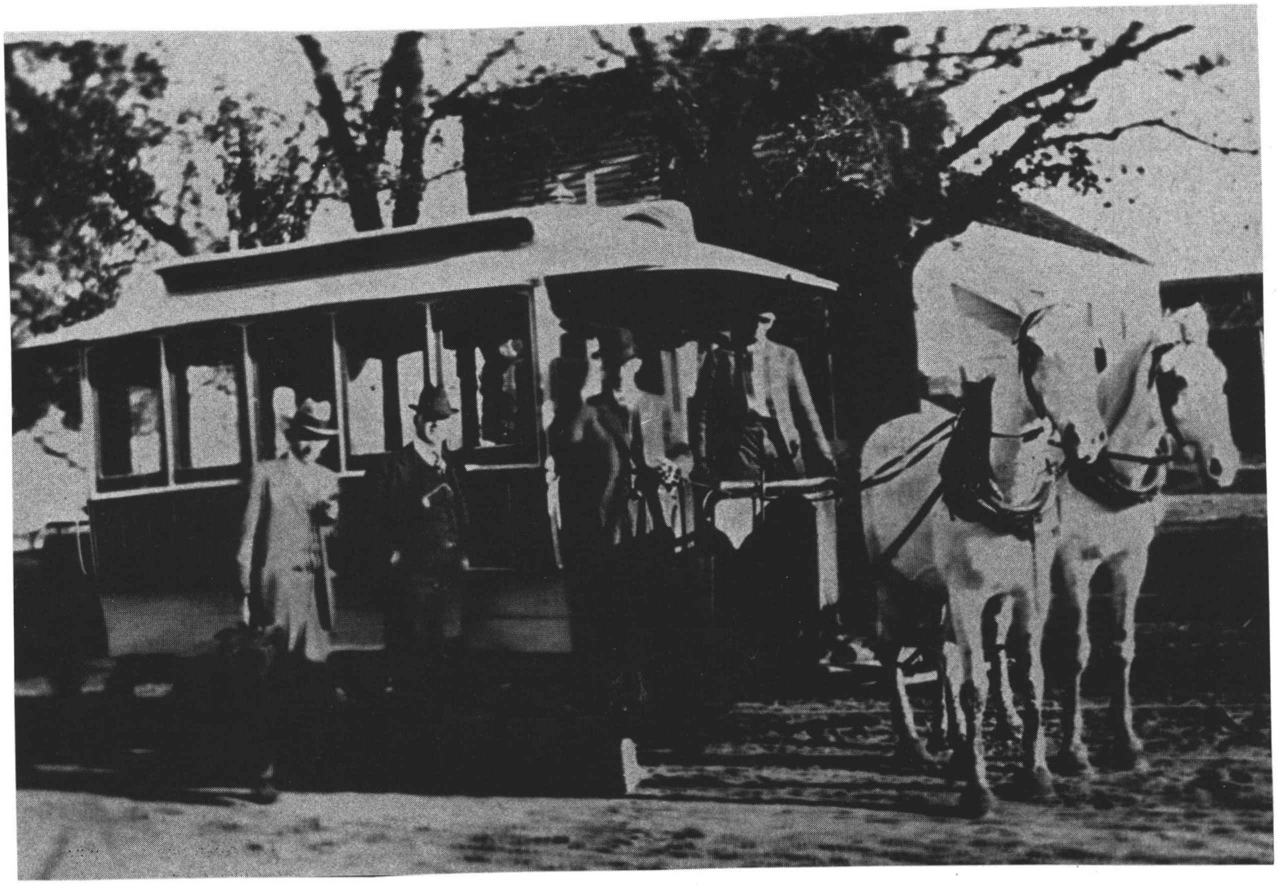
Next week we'll return to the quiet but important story of Grace Erickson.

ANOKA STREET RAILWAY

AVERY®c PV119ED

ANOKA ST. RY. HORSECAR LINE


RUM RIVER
N
G. N. RY. – N. P. RY.
PLEASANT ST.
NORTH ST.
FERRY ST.
4TH AVE. N
ANOKA
MAIN ST.
ANOKA
CHAMPLIN
MISSISSIPPI RIVER



ANOKA STREET RAILWAY

Anoka

The first railroad between Minneapolis-St.Paul and St.Cloud built through Anoka, a small city located at the junction of the Mississippi and Rum Rivers. Ordinance 42, authorizing and regulating street railways in the City of Anoka was approved in March 1884. The track started at the north end of the Mississippi River bridge and went north on Ferry St. almost to Pleasant St.. At Main and Ferry Streets, a wye was built and track built east on Main St., north on 4th Ave. N. to North St., and east on North St. to the railroad stations. Strap rail was laid on wood stringers fastened to widely spaced crossties. The horsecar barn was located on Ferry St. about 200 ft. north of the corner of Main St. (just beyond where a Baptist church was located as of 1964).

The line was officially opened June 21, 1884, with two cars, numbers 1 and 2. To stimulate patronage businessmen were urged to purchase a dollar's worth of tickets each and let their children use them up riding about town on the horsecars. The newspaper of that date said two bands were out playing, the skating rink was crowded and the streets filled with people, as the street railway commenced business. Fare was five cents. The line competed with horse-drawn "buses" which called at private homes to transport passengers to the railroad stations.

July 31, 1884, newspaper: "The street railway is in good demand. Give us the other car so that the public can be better accommodated." October 14, 1885, newspaper: "One of the horses of the street railway was killed last week and a subscription was taken up among the businessmen to purchase a new nag."

October 21, 1885, newspaper: "During the past week the proprietors of the Anoka Street Railway ~~mde~~ made arrangements to extend their line the whole length of Ferry St., from Reed & Sherwood's mill (now Cornelius Co.) to Champlin [over the old Mississippi River bridge]. All indebtedness has been cleared." The June 20, **1888**, timetable listed the regular stops as Champlin, Martinville, Chamberlain's Corner, and Depot.

Ordinance 42 was amended June 18, 1888, authorizing extension of the line. Terms were as follows. "Anoka Street Railway Co. is hereby granted for the term of 50 years exclusive right and privilege of constructing and operating a single or double track for a passenger railway line, with all necessary tracks...in such streets as the City Council may deem suited to street railways." There were restrictions imposed. "The cars to be used upon such tracks shall be propelled with either animal or pneumatic power...provided such power did not prove to be a public nuisance." "No locomotive, freight or passenger car such as usually run over general railways of this state may be used upon any of such tracks." "Tracks shall be laid in center of streets in all cases...and shall not be laid within 12 feet of the sidewalk; space between rails and on either side must be kept in proper repair." "The cars of the company shall be entitled to the track and in all cases where any team or vehicle shall meet or be overtaken upon either of the street railways, such team or vehicles shall give way to said car. All cars shall carry signal lights after dark." "No car shall be run at a greater speed than six miles per hour." "While cars are turning corners or crossing bridges, the horses or mules attached thereto shall not be driven faster than a walk."
"The conductor or driver shall use proper diligence to prevent ladies or children under 12 from leaving or entering the cars while in motion."

A 1966 history written by George H. Atwood, president of the Anoka County Historical Society, states that horsecar track was also built east on Pleasant St. from Ferry St. over the Rum River bridge to Pierce St. and on Pierce St. to a connection with the existing horsecar track on North St. near the railroad station. This is the only reference I have seen to such an extension.

Based on the track mileage reported in the 1890 U.S. Census and scaling distances off a map it seems that this extension could have existed. Perhaps this was the reason for the 1888 amendment of Ordinance 42.

One week after the June 20, 1888, timetable went into effect, the street railway began operating a baggage wagon from the public square to the depot. But some controversy started developing over patronizing the horsecars. One irate letter writer favored the "bus" line which provided "bus service all winter, even with three feet of snow, something the streetcars failed to do several times."

July 25, 1888 newspaper: "R. Mahany received yesterday a handsome new bus to run between the city and the depot." January 23, 1889 newspaper: "The horses attached to horsecar #2 indulged in a runaway Saturday night. The stove was tipped, setting fire to the car. Flames were extinguished after doing $15 worth of damage."

July 3, 1889 newspaper: "Robert Mahany, proprietor of the Anoka Bus line, has purchased the Anoka streetcar line from the mortgage holders who foreclosed the mortgage some time ago. There is a slight hitch between the former owner and the mortgage holders relative to the ownership of some of the horses and car #3. Two cars have been turned over to Mr. Mahany and yesterday they made trips for the first time in four days."

The 1890 U.S. Census listed the following information. Length of line 2.75 miles, sidings 0.25 miles, total track 3.00 miles. Three horsecars and 10 horses owned. Two cars operated in regular service.

The 1891 Street Railway Journal reported the following. Officers: Robert Mahany, president; Robert Mahany Jr., vice president and treasurer; James Mahany, secretary; and W. Mahany, general manager. Three miles of track laid with 26 lb. T rail laid to 4'8½" gauge. Three cars and 13 horses owned.

The 1897 Street Railway Journal listed the company as operating six horsecars over three miles of track. However according to Mr. Atwood's history Robert Mahany ceased operations and abandoned the system in 1894 after accumulating a loss of $35,000. Some track from this horsecar system was unearthed during a 1964 road construction project.

AUG
1890

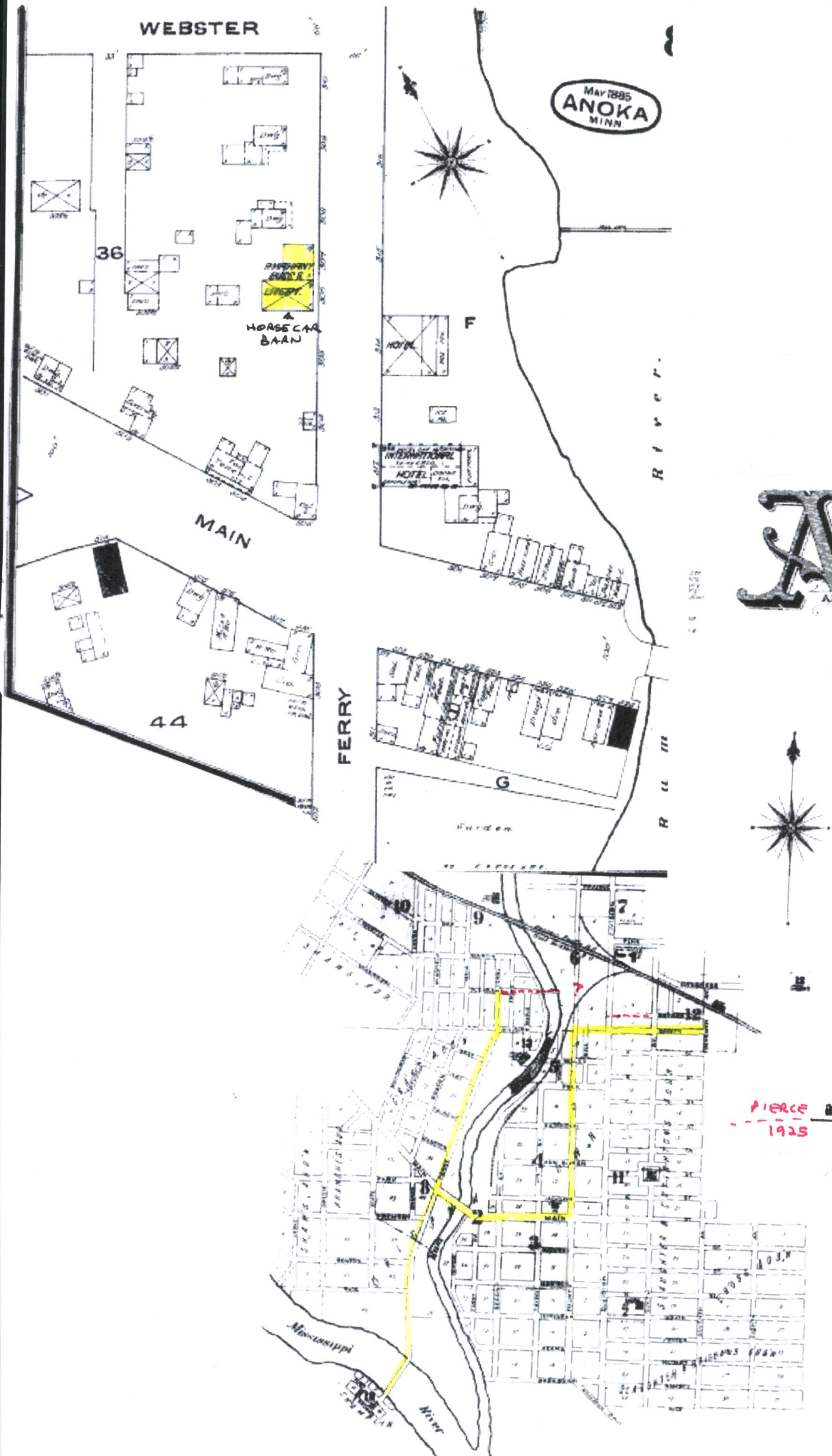
Anoka Street Ry. Co. Main line, 8 miles; gauge, 4 ft. 8½ in.; rail, 26 lbs.; cars, 3; horses, 13. R. Mahany, *Pres.;* Jas. Mahany *Sec.;* R. Mahany, Jr., *Treas.;* W. Mahany, *Gen. Man.* GENERAL OFFICE, Anoka, Minn.

ANOKA, MINN.

Population in 1880, 2,706, in 1890, 4,252.
Anoka Street Railway Co.—The franchises, equipment, etc., of this company have been leased to the city for 5 years.
Date of information, Apr., 1897. a z

ANOKA, MINN.

Population in 1880, 2,706, in 1890, 4,252.
Anoka Street Railway Co.—The franchises, equipment, etc., of this company have been leased to the city for 5 years from 1898.
PLANT AND EQUIPMENT.—Miles of track, 3; 6 horses; 3 horse cars.
Date of information, Feb., 1900. z


May 1885
ANOKA
MINN.
WEBSTER
MAIN
FERRY
36
44
F
G
HOTEL
INTERNATIONAL HOTEL
Garden
Rum River
Mississippi River
HORSECAR BARN

PIERCE 1925
BECKER 1891

347770?
(#6318)

ANOKA
ANOKA CO.
MINNESOTA

PUBLISHED BY THE SANBORN-PERRIS MAP CO. Limited
117 BROADWAY, NEW YORK
AUG. 1891

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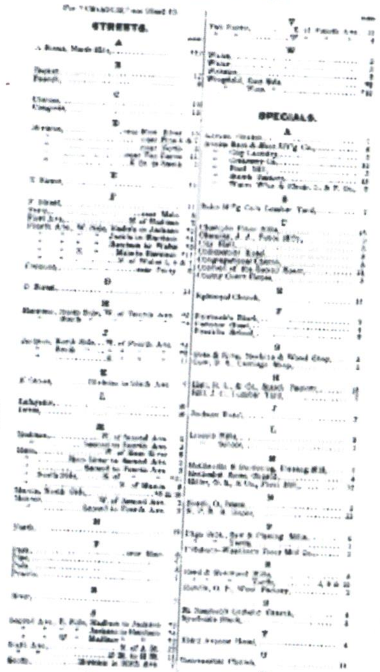
INDEX.



Map Div...

ANOKA STREET CARS. 1884 to 1941.

Up until about,- 1883-84,- there was no bridge across the Mississippi River, between Anoka and Champlin,- and all traffic had to be carried on by a ferry or by boat,- that landed on the south end of Ferry street on the Anoka side of the river;- - But in,- 1883-84,- the first bridge was built across the river connecting up the two villages;- - This was a steel bridge with a wood planking floor;- - The central section of the bridge was on a pivot or a turnstile,- so it could be rotated and swung open to allow the big river boats to pass thru,- as the bridge was built rather low on a level with the river banks with not enough head room to permit a large boat to pass beneath the bridge,- and many times this center section was opened up to allow the big,- River Boat Wannigans,- to pass thru,- during the big log drives down the river during the logging days.

After the completion of the new steel bridge in,- 1884, a group of enterprising men of Anoka, conceived the idea to put a horse drawn street car service into operation for the people of Anoka and Champlin;- - Steel tracks were laid in the center of Ferry street, beginning at the north end of the bridge and ran north up Ferry street to Pleasnat street,- where it then turned east and crossed the Rum river on the upper bridge, then angled over to the rail road depot by way of, Pierce street;- - At West Main street, a Y switch was installed, with another track running east across the Main street Rum river bridge, that extended on east to Fourth Avenue,- where it,- turned north and followed Fourth Avenue to North street,- then turned east and angled off to the rail road depot to meet with the other track.

At West Main street,- about 200 feet north of the corner, just beyond where the Baptist church stood in 1964,- the car barns were erected to house the horses and mules that pulled the cars,- and to house the street cars when not in use.- - A short time later,- the tracks were extended across the new bridge over to Champlin,- about 200 feet beyond the bridge.

The opening day was,- June 21st; 1884,- when the horse drawn street cars first began their operations,- with considerable fan-fare,- with two bands playing popular music,- the streets were filled with people and the skating rink was crowded;- - The fare was only 5¢,- and to stimulate business to get it off on a good start,- business men were urged to purchase a dollrs worth of tickets and let their children ride the street cars all over the town.

The time-table scheduled several stopping places, such as,- Champlin,- Matinsville or Slabtown,- Chamberlains Corner, and the Rail road depot.

July 31st;- 1884,- the street cars were in great demand,- and the public demanded that they give them another street car, so the public can be better accommadated;- - Oct; 21st; 1885,- the tracks were extended the full length of Ferry street, to the,- Reed & Sherwood Manufacruring plant,-(where the Cornelius Co; plant stands today.)

The Anoka Horse Drawn Street Cars did a prosperous business for about five or six years,- but it had its draw-backs and difficulties, as it was held up with bad and stormy weather, and occassionally the cars would jump the tracks and would be delayed in getting it back on the tracks;- and there was considerable complaints about its undependibity,- as a consequence,- horse drawn busses and stage coaches began to spring up and cut into the passenger service as they would call at the peoples homes to pick them up;

On July 25th; 1888,- Robert Mahany, received his first hansome and brightly painted new bus, to make runs from around the village of Anoka to the depot;- and at the Jackson Hotel.

ANOKA STREET CARS.

About a year later, on July 3rd; 1889,- Robert Mahanay, proprieter of the new Anoka Bus Lines,- purchased the property of the Anoka Street railway, from the mortgagees,- who had forclosed sometime previously;- - There were now several bus lines,-(horse drawn)- doing business within the city of Anoka and competeing with the Horse drawn street cars,- which gave a better and more convenient service as it was more flexible,- and the horse drawn street cars were abandoned and went out of business in 1894.

Among the drivers of the Anoka horse drawn street cars of the late 19th; century,- were,- Bill Mahany and Edward Haskell.- and some of the old rails of the old horse drawn street cars tracks were unearthed in 1964 during road construction.

Robert Mahany, who bought the property rights of the Anoka horse drawn street cars lines continued operating the service until 1894,- when he closed it down, with a loss of about,-$35,000.00

With the desolution of the Anoka Horse drawn street cars in 1894,- Anoka and Champlin were without any such street railway services, for over eighteen years,- except for the busses and stage coaches;- In 1911-12,- another bus service came into being, known as the,- Girling Warner bus service,- which consisted of long flat truck bodies with six or seven rows of seats mounted crosswise of the body and mounted on hard rubber tired wheels, and covered with a canopy;- This bus carried passengers from Anoka and Champlin to north Minneapolis at Camden, by way of Osseo, Robbinsdale and Crystal;- It was a hard riding and bumpy bus, and continued in operation for only about two years;- - One of the bus drivers was,- Everett Ward,of Anoka in 1912.-13

TOWER & SOUDAN STREET RAILWAY

Tower & Soudan Street Railway

In 1891 a streetcar line replaced the Tower Stage Line which since 1888 had provided the only means of public transportation between Tower and the mines. The streetcar was pulled by a small steam engine over three miles of narrow gauge track. It ran the full length of Tower's main street and regular stops were made at every street corner. The company was owned and operated by Charles Trengrove, a former copper miner from Anaconda, Montana. Trengrove's streetcar made 10 trips per day and ran seven days per week until the 1893 mine closing.

Minnesota's Iron Country
Marvin G. Lampa 2004
Lake Superior Port Cities Inc., Duluth, MN

7[redacted]/14/1896 (DH) The City of Tower yesterday afternoon began suit against the Tower & Soudan St. Ry. Co., A. H. Crassweller, its receiver, and the American Loan and Trust Co. to annul the railway's franchise. The road was given a franchise in March, 1890, and it received also the city's bond for $6,000, the consideration for both of which was that the road should run for 20 years. It ran spasmodically until March 4, 1894, when it expired, and it is now one of the deadest roads in the country. The city claims that the franchise and bond and in fact the road itself is forfeit, and it wants the court to annul the franchise and give it all there is left of the road, 6,333 yards of steel rails, worth $1,200. The Am. Loan & Trust Co. claims some title to the rails by virtue of the bonds of the road, but the city claims that its claim is prior. The right-of-way of the road has lapsed to the original owners long ago.

Duluth Herald Newspaper 7 ~~or 8~~/14/1896

Minnesota Iron Company
Inc. December 1, 1882

The Soudan Iron mine is the oldest and deepest mine in Minnesota. The first crew of miners left Duluth in June 1882. Initial evacuations were underway when the town site of Tower was laid out in 1882 in anticipation of the iron mining industry.

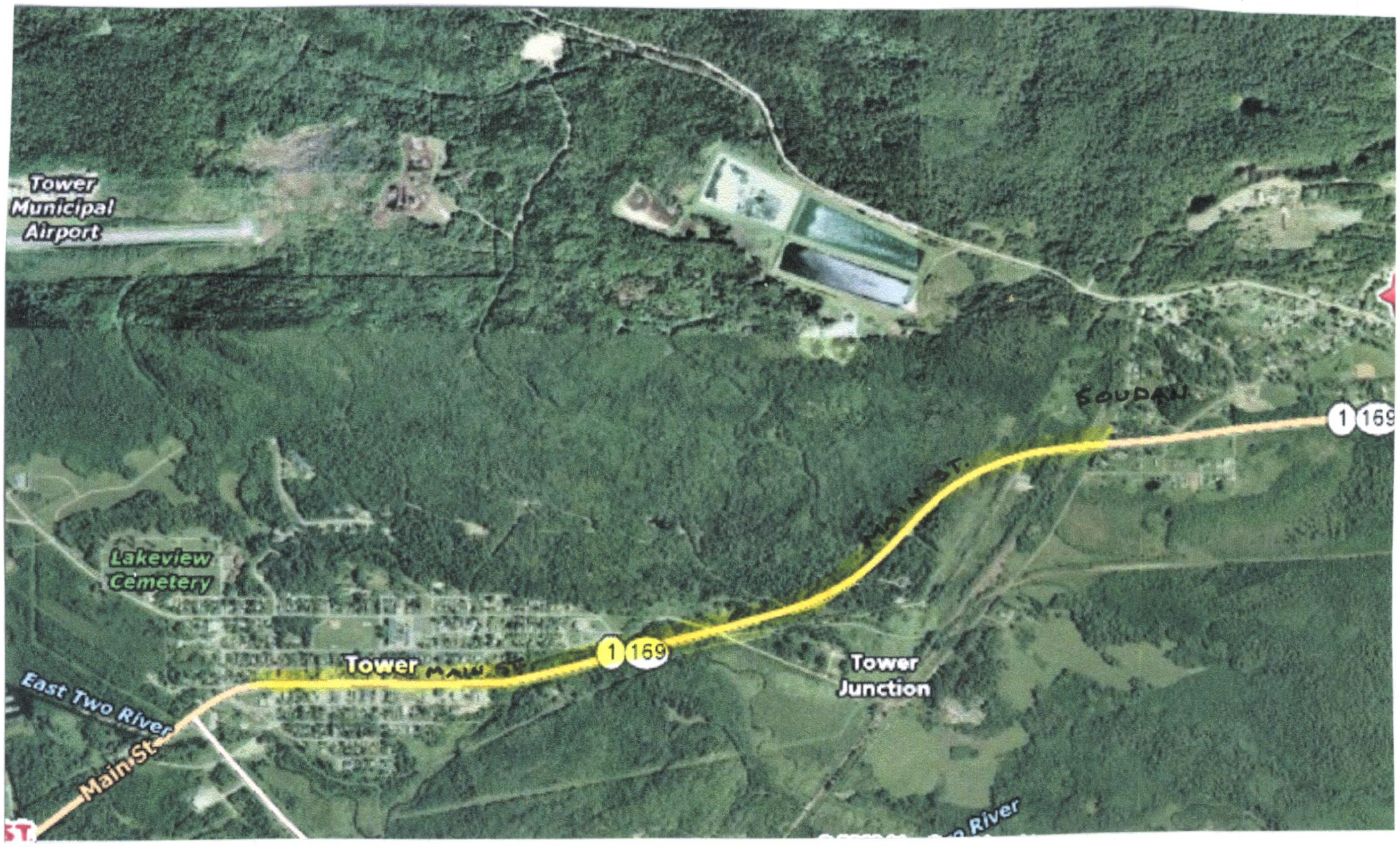
The official opening of the mine was in 1884 with the first shipments of ore being delivered July 31st via a newly completed rail line to Two Harbors. This marked the beginning utilization of one of the richest iron ore deposits in the world. The first workings were open pits. Over time, the mine would include fifteen major open pits and shafts, with twenty other minor workings. By 1890, above ground mining ceased and all operations were underground. Eventually, the main shaft extended to a depth of almost 2,400 feet. The mine reached its peak production in 1892, shipping over 568,000 tons of high-grade ore and employing over 1,800 men. The mine produced over 17.9 million tons of ore during its operation.

As the mine grew, so did the communities of Tower and Soudan. Founded at the very edge of the mine, Soudan was a classic company town - the mining company and the community almost indistinguishable. The town began as two sites named Stone and Breitung, each named for a nearby ore pit. The company managed the settlement and built houses, a hospital, a community center, and a sawmill, as well as cleaned the streets and developed wells for clean water. Population was 1,000 in 1887 and almost 2,000 in 1888.

Tower grew independent of the mining company, but still existed to serve the mine and its workers. The

City of Tower, incorporated on Nov. 11, 1884, is the oldest city north of Duluth, and grew with the success of the mine. In May of 1890 Tower had a population of about 3,000. By 1891 the population of Tower doubled to 6,000. But by 1892 the mining boom was over and the Tower population was 5,000 and declining.

The financial panic of 1893 resulted in the closing of the Soudan Mine. Vermillion Iron Journal 8-10-1893: Minnesota Iron Company has suspended all mining operations and its machinery is idle. 1,100 men were discharged with 300 being retained. Impact on the community was profound. Within a few months its [Soudan] population dropped to a few hundred people.


Tower Municipal Airport
SOUDAN
1 169
MAIN ST.
Lakeview Cemetery
Tower
MAIN ST
1 169
Tower Junction
East Two River
Main St
ST
River

LACROSSE CITY RAILWAY

The La Crosse, Wis., City Railway.

Saturday evening, August 5, witnessed the operation of the first electric car of the La Crosse City Railway, and marked the introduction of rapid transit to the second city of Wisconsin, which had in this respect been far behind smaller places in the state. The car, containing the officers of the company and a few invited guests, left the new car house at the corner of 3d and La Crosse Streets at 8:30 P. M., and made the trip across the causeway to North La Crosse and return as smoothly as if a matter of daily occurrence, not even the trolley jumping. After making several other trips and getting the motormen trained, the line to North La Crosse was formally opened Tuesday afternoon, horses being taken off and electricity substituted. On August 19 the Main Street line was electrically operated, and the remaining two lines will soon be equipped for service.

Electrical construction on the La Crosse City Railway was begun last April, under the direction of Clement C. Smith, formerly of the Minneapolis and Milwaukee roads, and involved the complete rebuilding of the entire system, including new buildings and new car equipments. The track is laid with from forty-five to sixty-six pound girder and T rails, spiked directly to the ties which are placed two feet center to center. Especial care has been taken to thoroughly tamp the ties and secure good joints, the splices being of the channel pattern bolted with Harvey grip bolts.

The curves are of the compound transition type, starting with 200 ft radius, similar to those of the Milwaukee Street Railway, illustrated in the STREET RAILWAY JOURNAL last February.

The rails are bonded with No. 0, soft drawn copper, tinned, the bond being made by turning the copper through a small brass casting, to which it is soldered, and which serves as a shoulder for riveting. The bond holes are slightly countersunk, so that a perfectly tight joint is made with one piece of copper, the brass shoulder not being essential to circuit. One bond is used at each joint, and the tracks are cross bonded every 120 ft. A supplementary wire of No. 0 copper is also run for some distance each side of the power station.

In the overhead construction iron poles of the lattice type are used in the business part of the city, and cedar poles on the other streets, all poles being set at the curb lines. The span wire is five-sixteenths galvanized steel strand, and trolley wire No. 0 hard drawn copper, supported by the new Lieb hanger with universal clip.

The cars were built by the St. Louis Car Company, and are sixteen foot body, seven feet six inches wide, with four foot platforms. They are mounted on McGuire Columbian and St. Louis Car Company trucks, with six foot six inch wheel base and thirty-three inch wheels. The motors are General Electric Company's W. P. 50 and W. P. 30, with Form E controller.

The car house, which is shown at the right in Fig. 2, is located at about the center of the system, and is 60 × 150 ft. It is built of red brick, and roofed with steel. It has four tracks, which will contain twenty four cars, entrance being made by four curves and switches from the main line. Three of the tracks are provided with pits, the outside walls of the first and third being of brick, the other rails being supported by trestling so that access is easy from pit to pit, and the circulation of air keeps them dry. The pits are lighted by electricity, and will be heated by steam pipes.

The car house also contains the offices of the company, consisting of rooms for president, secretary, superintendent and motormen, and has also repair shops and store room. Fire protection and water for various uses is provided by two hydrants located along the center of the building.

The power building (Fig. 2) is directly west of the car house, from which it is separated by a twenty foot alley. It is of brick, like the car house, care being taken in both buildings to provide abundance of light and ventilation. It consists of a power room, 50 × 60 ft., and a boiler room 39 × 40 ft.

The engine (Fig. 1) is an 18 × 42 in. Reynolds-Corliss condensing, built by the E. P. Allis Company, having a sixteen foot flywheel which weighs 23,000 lbs. It is connected by a twenty-eight inch leather belt to a countershaft, on either end of which is set a 100 K. W., multipolar generator, made by the General Electric Company, and operated by friction clutches, so that either or both generators may be run at will. The switchboard is of the General Electric Company's latest form, with automatic curciut breakers, and of polished black slate. Water for the condenser is furnished by an artesian well, to which the ground wire is also run.

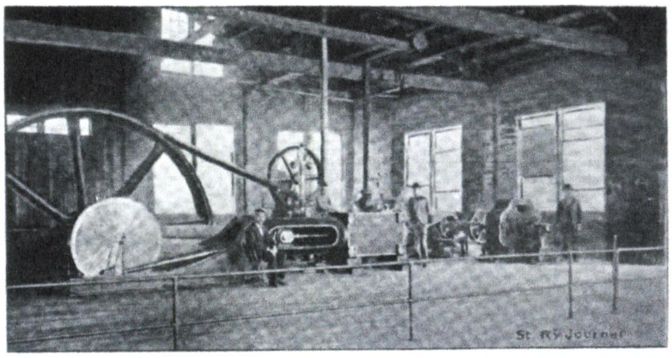


FIG. 1.—INTERIOR OF ENGINE ROOM—LA CROSSE, WIS., CITY RAILWAY,

The boilers, two in number, are of the horizontal type, 16 ft. × 66 ins., made by the Funk Boiler Works, of La Crosse. The fuel used consists of slabs and scraps, which are furnished by neighboring saw mills. Both boiler and power rooms are of sufficient size to accommodate a duplicate plant, which will be put in when required.

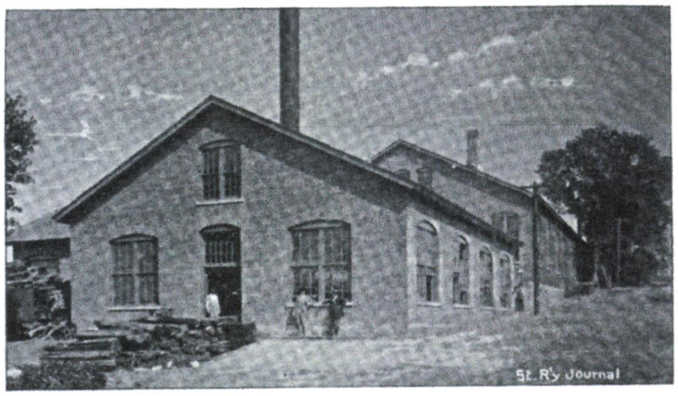


FIG. 2.—STATION AND CAR HOUSE—LA CROSSE, WIS., CITY RAILWAY.

The officers of the company are B. E. Edwards, president; W. W. Cargill, vice-president; H. E. Ward, secretary; P. Valier and George Smith, superintendents.

The entire stock and bonds issued for construction is held by citizens of La Crosse, a condition not often found in similar enterprises and which indicates the confidence of the people of La Crosse in the road and its officers.

* * *

A BROADWAY (New York) cable car has been fitted with the Clarke life fender, manufactured by F. H. Clarke, of Springfield, O. Some recent tests have been made with a 200 lb. bag of sand.

Digitized by Google

LaCrosse

TRANSIT service in LaCrosse began in 1878 with a horsecar line built by the LaCrosse Street Railway. A second company built a competing line in 1882 and the two companies merged later that year. In 1885 the company was reorganized as the LaCrosse City Railway Company and it was this company that electrified the system in 1893.

In 1907 the company got into a franchise wrangle with the City of LaCrosse arising out of grants for extensions to certain routes. For a time the City repealed all franchises, but the cars were able to continue running throughout the period of the dispute. Agreement was ultimately reached, and the new franchise called for an extension of the Main Street Line to the Catholic Cemetery at Losey Road. Included was a $1,000 penalty provision if the company failed to complete the line by early 1908. The company failed to complete construction by the deadline. The Council kindly chose to accept delayed construction of the line instead of enforcing the penalty.

In the first decade of the century, LaCrosse was a mecca for interurban promotions. Lines to Eau Claire and Viroqua, Wisconsin, and Winona, Minnesota were among those proposed. An enterprise called the Wisconsin Water Power Company proposed a line to Sparta, Wisconsin which involved electrifying portions of the CB&Q and Green Bay and Western steam road lines.

The Winona, Minnesota line was promoted by the same interests which controlled the LaCrosse City Railway Company. Specific franchises were issued to cover interurban construction of the LaCrosse-Winona line were issued by the City of LaCrosse in 1907 with the understanding that the line would be completed in two years. No construction was undertaken, and a second franchise was issued in 1910, still no construction, then or ever.

A strike of street railway employees in 1909 ended with a defeat for labor and the company holding to its insistence on an open shop.

The LaCrosse and Winona, Minnesota city systems were under common ownership for many years. The utility interests never produced capital to link the two systems, but down to the end of the trolley era, equipment transfers were common. They were so frequent that specific assignments are hard to determine. In fact, some pictures suggest that a common destination sign roll may have been used for both properties, which makes identification of pictures difficult.

The Wisconsin Railway, Light & Power Company acquired both the LaCrosse and Winona Railways in 1915. After a few years the LaCrosse Company was merged into the parent WRL&P Company. (This company was affiliated with the Wisconsin Public Service system which operated trolleys in other cities in Wisconsin.)

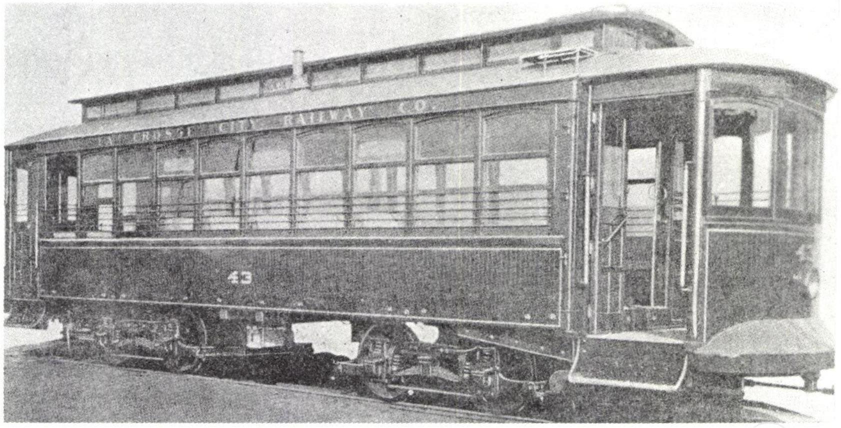
To adjust to the conditions of the time, the WRL&P revamped its route pattern in the early 1920's, construction of a new line on 16th Street and abandonment on other streets took place. The result was a three-route system, viz:

North side — 16th Street — the longest and most heavily used line

South Avenue — 23rd Street

Market Street — Myrick Park

In 1926, WRL&PC merged with the Winona



RIGHT: **Car 43 was built by the American Car Co. as a semi-convertible.** Myles Jarrow.

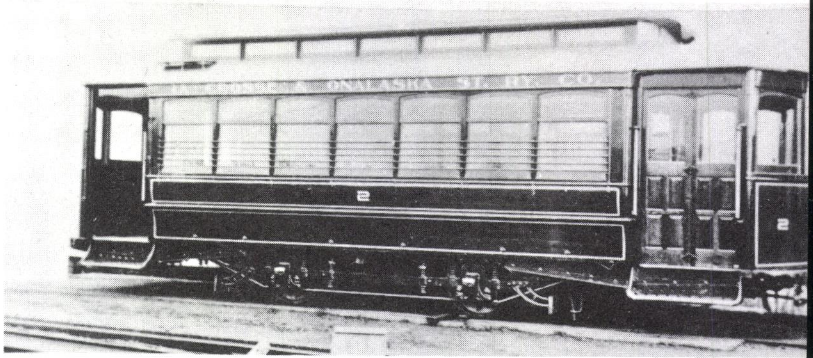
(Minn.) Company and changed its name to the Mississippi Valley Public Service Company.

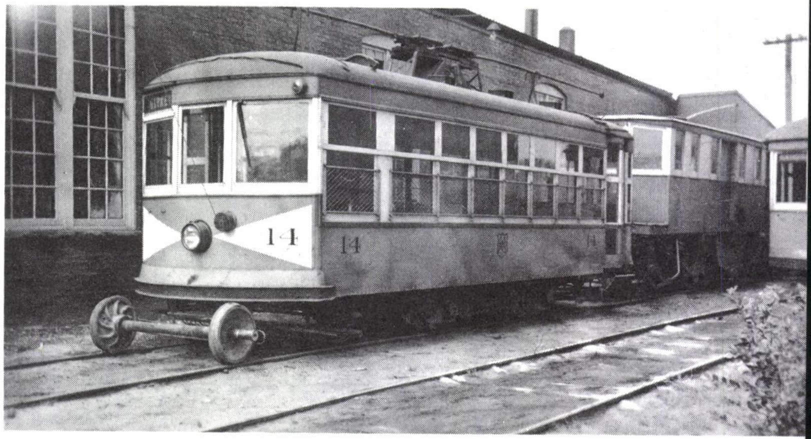
The pattern of the 1930's was abandonment and retrenchment. The Myrick Park and South Avenue-23rd Street Lines were abandoned in 1930, the Market Street Line in 1931, the 16th Street leg of the remaining line went in 1936. The long North Side Line, using the double-truck cars, continued through the rest of the 1930's and the war years, not being replaced by buses until 1945.

LaCrosse and Onalaska Street Railway Company

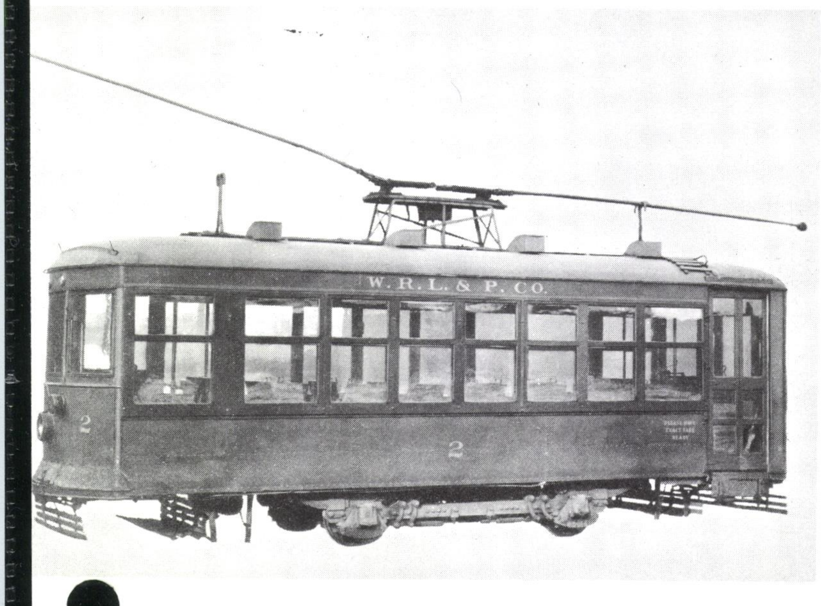
This company built a little over two miles of line in 1902 from the end of LaCrosse's North Side line to the city of Onalaska; power was purchased from LaCrosse. There was no car barn and repairs to the one second-hand, single-truck car appear to have been made at LaCrosse. A new car was bought from the American Car Company in 1911.

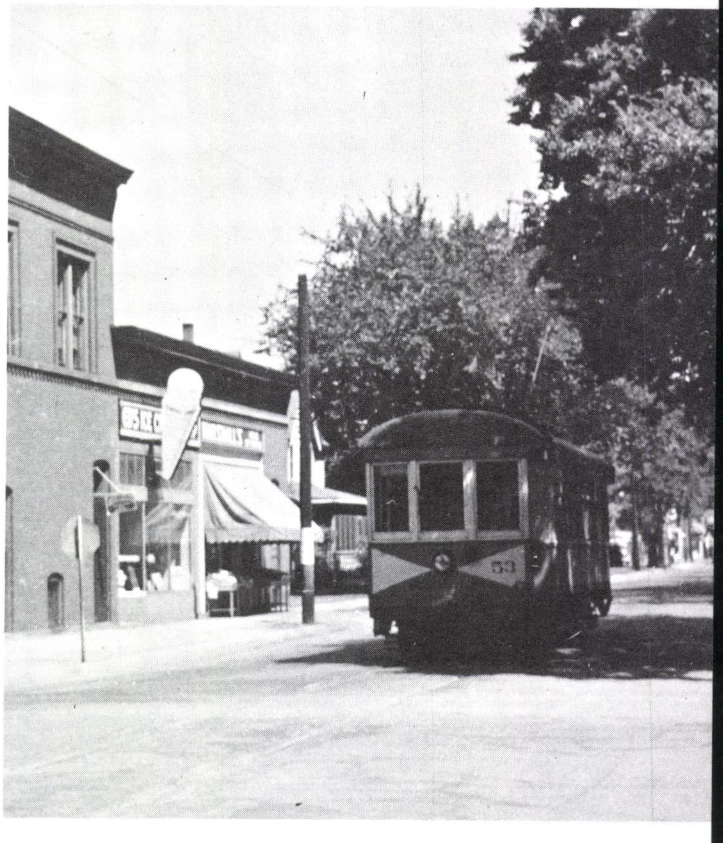
About 1914, the LaCrosse Company leased the Onalaska road and operated it as a shuttle connecting with its North Side Line. Operation was discontinued December 31, 1930.



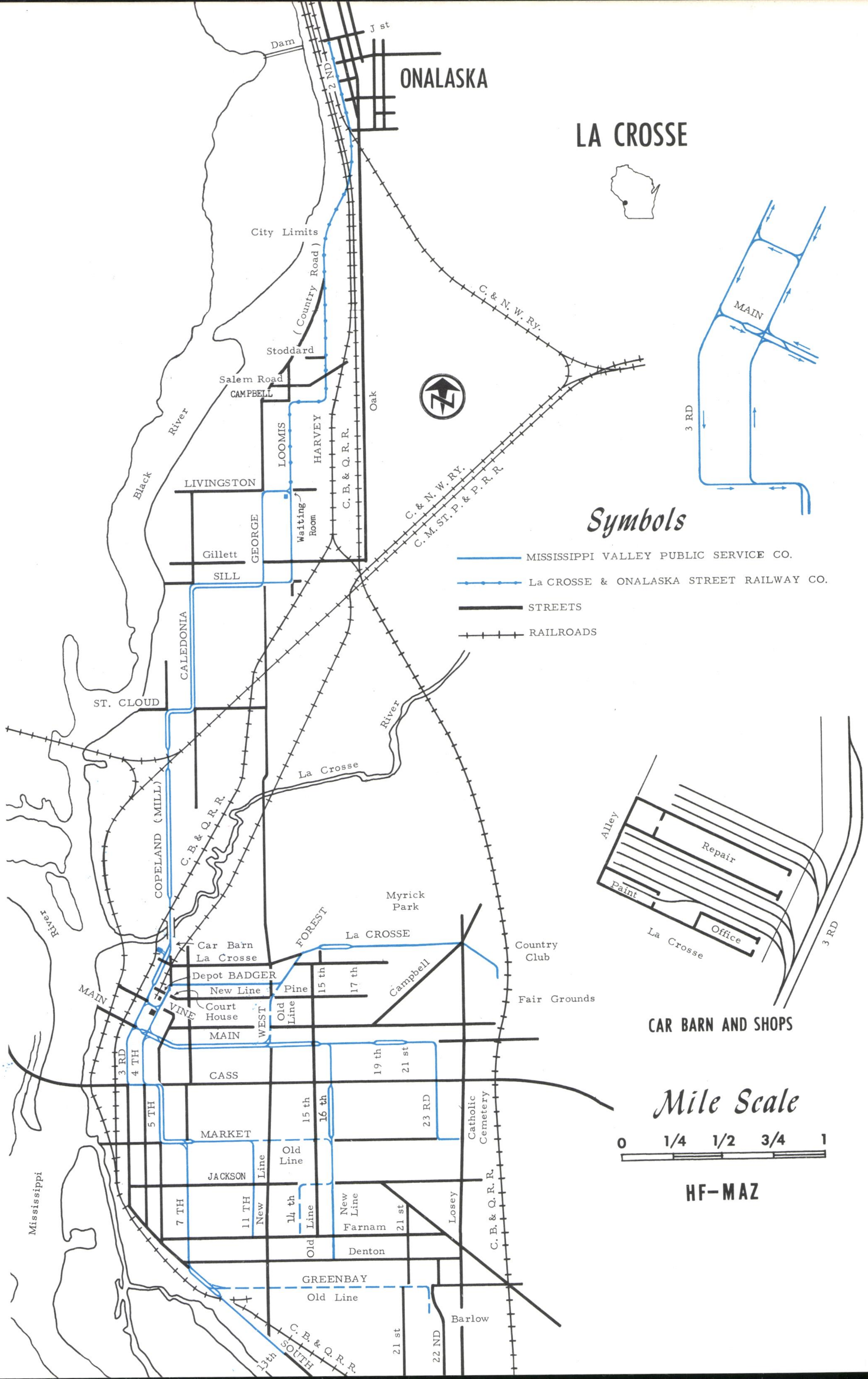


UPPER RIGHT: **Car 2 of the La Crosse and Onalaska Street Railway Co.** Theodore Taetsch. CENTER: **Birney No. 14 next to the carbarn.** LOWER RIGHT: **Car 53 entering downtown La Crosse.** Frank Butts. BELOW: **A company view of Birney No. 2.** Wisconsin Public Service Co.



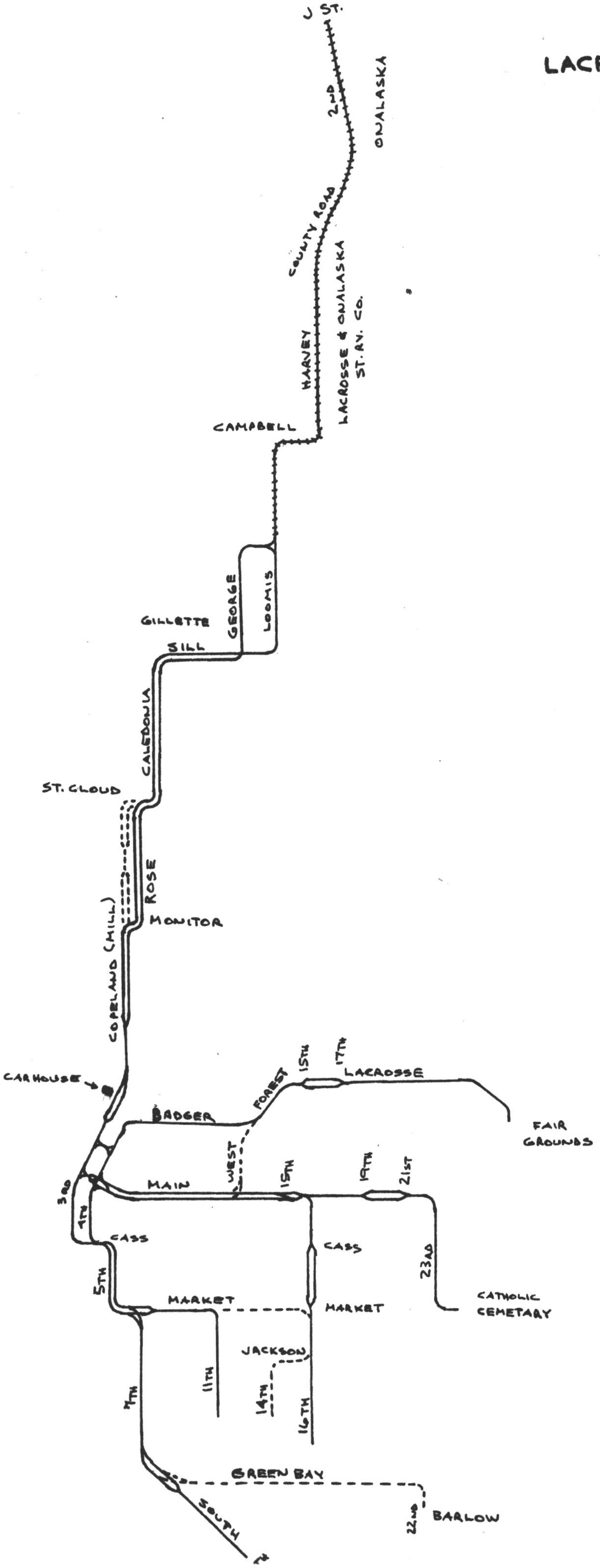


LA CROSSE

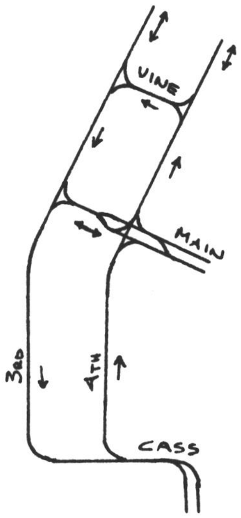


ONALASKA
J st
Dam
2 ND
City Limits
(Country Road)
Stoddard
Salem Road
CAMPBELL
Black River
LIVINGSTON
LOOMIS
HARVEY
C. B. & Q. R. R.
Oak
C. & N. W. Ry.
MAIN
3 RD
Waiting Room
GEORGE
Gillett
SILL
C. & N. W. RY.
C. M. ST. P. & P. R. R.
CALEDONIA
ST. CLOUD
COPELAND (MILL)
C. B. & Q. R. R.
La Crosse River
Myrick Park
River
Car Barn
La Crosse
Depot BADGER
New Line
Court House
FOREST
La CROSSE
Country Club
Campbell
Pine
15 th
17 th
Old Line
WEST
VINE
MAIN
Fair Grounds
3 RD
4 TH
CASS
19 th
21 st
5 TH
15 th
16 th
23 RD
Catholic Cemetery
MARKET
Old Line
JACKSON
Line
Mississippi
7 TH
11 TH
New
14 th
Line
New Line
Farnam
21 st
Losey
C. B. & Q. R. R.
Old
Denton
GREENBAY
Old Line
Barlow
21 st
22 ND
13th
SOUTH
C. B. & Q. R. R.
Symbols
MISSISSIPPI VALLEY PUBLIC SERVICE CO.
La CROSSE & ONALASKA STREET RAILWAY CO.
STREETS
RAILROADS
Alley
Repair
Paint
Office
La Crosse
3 RD
CAR BARN AND SHOPS
Mile Scale
0 1/4 1/2 3/4 1
HF-MAZ

LACROSSE, WISCONSIN
TRACK MAP

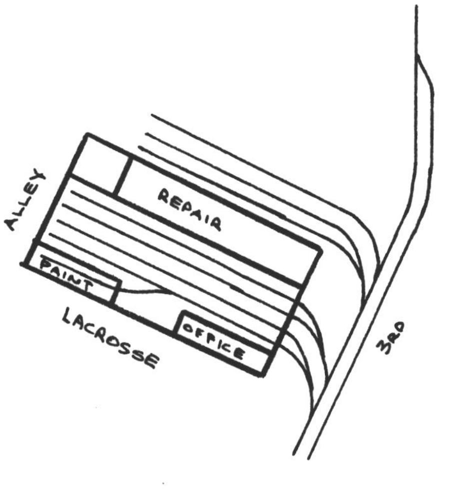


J ST.
2ND
ONALASKA
COUNTY ROAD
LACROSSE & ONALASKA ST. RY. CO.
HARVEY
CAMPBELL
GEORGE
LOOMIS
GILLETTE
SILL
CALEDONIA
ST. CLOUD
ROSE
MONITOR
COPELAND (MILL)
CARHOUSE
15TH
17TH
LACROSSE
FOREST
BADGER
FAIR GROUNDS
WEST
3RD
4TH
MAIN
15TH
19TH
21ST
CASS
CASS
23RD
5TH
MARKET
MARKET
CATHOLIC CEMETARY
JACKSON
11TH
14TH
16TH
7TH
GREEN BAY
SOUTH
22ND
BARLOW



VINE
MAIN
3RD
4TH
CASS

ENLARGEMENT OF DOWNTOWN AREA



ALLEY
REPAIR
PAINT
LACROSSE
OFFICE
3RD

CARHOUSE

LACROSSE CITY RAILWAY

LaCrosse, Wisconsin

Horsecars

The LaCrosse Street Railway was incorporated by David Law June 19, 1878. Operation of horsecars over the first line began July 4, 1879. This line ran from 3rd and Main Streets north on 3rd St., over the causeway, then the Plank Road, and up Mill St. (later Copeland Ave.) to Windsor St., a distance of 1.84 miles. The northern terminal was in front of the office of the LaCrosse Lumber Co. where their "Big Mill" was located. At this time there were eight or more sawmills located on the north side of the LaCrosse River. The horsecar barn and stables were built at Mill and Car Streets. Five horsecars were purchased in 1879; three were from Chicago and two from St. Louis, the latter arriving later in the fall. One additional horsecar arrived during 1880. Some were closed cars with 10 ft. bodies seating eight persons on longitudinal benches; some were open cars 15 ft. long seating 16 persons on "cane seat chairs" with weather protection by canvas side curtains. In a short time the line was extended from Mill St. two blocks east to Caledonia St., then north on Caledonia St. to Logan St. This entire line was referred to as the NORTH SIDE line.

The City Street Railway (another source says the LaCrosse City Railway) was organized in June, 1881 and began operation November 8, 1881, with two horsecars. Accounts vary as to the location of this horsecar line. One source states that it was built from 2nd and Vine Streets (C.M.&St.P. Ry. depot) to Main St., east to 4th St., south on 4th St. to the Shooting Park southeast of the John Gund brewery, 2.6 miles long. A more explicit account reports the route from 2nd and Vine Streets south on 2nd St. to Pearl St., east on Pearl St. to 4th St., south on 4th St. to Cass St., east on Cass St. to 5th St., south on 5th St. to the Mormon Coulee Road (now South Ave.), then on that road to the Green Bay & Western R.R. depot at 9th St. In addition a stub line ran on 4th St. from Pearl St. north to Main St. The horsecar barn and stables were located at 7th St. and Mormon Coulee Road. This was referred to as the SOUTH SIDE line.

The two companies were merged a few years later. One account states the LaCrosse Street Railway and the City Street Railway were merged into the LaCrosse City Railway in 1885. Another says the LaCrosse Street Railway and the LaCrosse City Railway were merged under the name of the latter company about 1888.

In 1886 the total track mileage was between five and six. About seven cars were operated, using one horse or two small mules per car. Mules were changed each trip in summer and every other trip in winter.

In 1888 the NORTH SIDE line was extended north to Sill St. and on Sill St., Charles St., Gillette St., and George St. to George and Gohres Streets. This extension was built to accommodate workers at the Chicago, Burlington & Northern Ry. (later the Chicago, Burlington & Quincy Ry.) roundhouse and the McDonald Mill at George and Gohres Streets. Also during 1888 a line was built on Market St. from 7th St. (sic) to 15th St., operated as a stub line.

When the LaCrosse Inter-State Fair was organized in 1890, a line was built from 4th and Main Streets on Main St., 12th St., and State St. to the Fair Grounds. Later this route was changed, track being abandoned on State St. and new track built north on 12th St. and Forest Ave. to LaCrosse St., then east on LaCrosse St. to the Fair Grounds entrance.

The 1890 U.S. Census reported 6.51 miles of line, 7.47 miles of track, 19 horsecars (numbered 1-19) and 78 horses and mules. An average of 14 cars were operated at one time.

Electrification

The first electric cars operated in the fall of 1890 on the NORTH SIDE line. Electrification of the remaining portions of the system was not completed until the fall of 1893.

The horsecars were then used as trailers. A train of one motor car pulling three trailers was not unusual. Eventually the horsecar bodies were sold to local residents. One body was purchased by C. S. Van Loon. A photograph of this car taken in a 1924 parade shows it intact with wheels, probably restored by the company for the occasion.

A new carhouse, repair shop and powerhouse were built at 3rd and LaCrosse Streets.

The LaCrosse City Railway was purchased by the Wisconsin Railway, Light & Power Co. on February 10, 1913. The name of the corporation was changed in January, 1926, to the Mississippi Valley Public Service Co.

Track Construction

Track built or abandoned during the 1893-1907 time period, exact dates unknown:

Built on	from	to
3rd St.	Main St.	Cass St.
Cass St.	3rd St.	4th St.
Market St.	5th St.	7th St.
7th St.	Market St.	South Ave.
Vine St.	3rd St.	4th St.
4th St.	Main St.	Vine St.
Market St.	15th St.	16th St.
16th St.	Market St.	Jackson St.
Jackson St.	16th St.	14th St.
14th St.	Jackson St.	Farnam St.
Abandoned on		
2nd St.	Vine St.	Pearl St.
Pearl St.	2nd St.	4th St.
5th St.	Market St.	South Ave.
South Ave.	5th St.	7th St.

During 1893 track on Charles and Gillette Streets was removed and relocated on Mill St. from Charles St. to George St. and on George St. from Sill St. to Gillette St. In 1895 track was extended from South Ave. on Green Bay (9th St.) east on Green Bay to 22nd St., and south on 22nd St. to Barlow St.

Two projects were undertaken during 1906. Track was abandoned on George St. from Livingston St. to Gohres St. Single track was built on Sill St. from George St. to Loomis St., on Loomis St. to Livingston St., and on Livingstone St. back to George St., forming a loop. Track was also built on South Ave. from Green Bay (9th St.) to 14th St. (Dayton St.).

U.S. Census data	1902	1907
Track Mileage:		
first main track	12.19	11.57
second main track	2.06	2.73
sidings	.19	.36
total track	14.44	14.66
Carhouses	1	2

1.43 miles of track had been built and opened during 1907. All overhead trolley was span wire construction.

During 1908 track was built on Main St. from 12th St. (West Ave.) to 23rd St., on 23rd St. to Market St., and east on Market St. to Losey Road.

Later in 1913 the track on Copeland Ave. (Mill St.) between Monitor St. and St.Cloud St. was removed and relocated on Rose St., one block east, in order to get tracks on the viaduct over the C.M.&St.P Railway. This was all double track.

The Electric Railway Journal reported 2.0 miles of new track built during 1915.

Complaints by the city to the Railroad Commission of Wisconsin led to extensive studies of the service provided. This resulted in orders being issued in September, 1916, for additional track construction to accomplish through-routing of lines. Most of this work was completed during 1917.

Construction	on	from	to
single track	11th St.	Market St.	Farnam St.
single track	16th St.	Jackson St.	Denton St.
second track	Main St.	12th St.	16th St.
second track	Market St.	5th St.	Existing double track between 5th and 6th Sts.
crossover	at 16th and Main Streets.		
crossover	at 4th and Main Streets.		
curve	from westbound on Main St. to northbound on 4th St.		
Abandon single track:			
	Market St.	11th St.	16th St.
	Jackson St.	14th St.	16th St.
	14th St.	Jackson St.	Farnam St.

Additional track construction was undertaken during 1920. Single track with turnouts was built on Badger St. from Forest St. to 4th St., and on 4th St. from Badger St. to Vine St. Single track was abandoned on 12th St. (West Ave.) from Badger St. to Main St.

Track on Green Bay from South Ave. to 22nd St., and on 22nd St. to Barlow St. was abandoned on an unknown date, but probably about this 1917-1920 time period.

According to transit directory information dated July, 1918, and December, 1923, the system comprised 16 miles of track of which 5.2 miles were in paved streets.

The streetcar lines were abandoned over a long period of time. World War II intervened to save the last line for a few more years.

1929: MYRICK PARK line.
1930: SOUTH SIDE line.
1932: MARKET ST. line. (1931 per another source.)
1932 or 1933: 23RD ST. line.
1936: 16TH ST. line. After this abandonment the only track used in downtown area was the 3rd St., Main St., 4th St., Vine St. loop.
1945: NORTH SIDE line; Saturday, November 10th. (12:20AM last run 11-11-1945)

Power System

The LaCrosse Water Power Co. installed one street railway Generator in its Edison Plant during 1908. Later a substation was erected at the carhouse where Rotary Converters were installed.

Power Station Equipment: one 600 h.p. Scotch Boiler; one 500 h.p. Allis-Chalmers Engine; two General Electric Co. Generators, with a total capacity of 500 KW (1918) and 800 KW (1923).

One Substation: one Rotary Converter and one Motor-Generator Set with a total capacity of 750 KW. Trolley voltage was 600 volts D.C.

Operations

Prior to 1917 the lines were not through-routed, and several were operated as shuttle lines: NORTH SIDE line, SOUTH SIDE line, 16TH STREET line, MARKET STREET line, 23RD STREET line, and OAK GROVE CEMETARY or MYRICK PARK line. The three lines last mentioned used the original 1893 single-truck cars with side seats. During rush hours extra cars of this same type were operated on the other lines as well.

The revised through-routings put into effect after the 1917 and 1920 track construction projects were as follows:

NORTH SIDE-16TH ST. line: from the north side over the present route to 3rd-Main-16th-to 16th and Denton. Return via 16th-Main-4th-Vine-3rd. Ten minute service requiring six cars from 5:50 a.m. to 11:00 p.m.; then 20 minute service until 12:20 a.m.

SOUTH SIDE-23RD ST. line: from the south side over South Ave.-7th-Market-5th-Cass-4th-Main-23rd-Market-to Market and Losey Road. Return via 23rd-Main-3rd-Cass-5th-Market-7th-etc. Ten minute service requiring five cars from 5:45 a.m. to 10:55 p.m., then 20 minute service until 11:55 p.m. and a last car at 12:20 a.m.

MARKET ST.-MYRICK PARK line: from 11th and Farnam-11th-Market-5th-Cass-4th-Badger-Forest-LaCrosse-Fairgrounds. Return via Badger-4th-Vine-3rd-Cass-5th-Market-etc. Ten minute service requiring five cars from 5:50 a.m. to 11:00 p.m.; then 20 minute service until 12:20 a.m.

This ten-minute service required a total of 16 cars.

Equipment

The following is a condensation of the detailed roster printed on page 149 of the CERA Publication 111 BADGER TRACTION, a copy of which is included in this notebook.

Number	Builder	Date	Type	
20-30	St.Louis Car Co.	1893	25'9" single-truck closed passenger motor	
31	St.Louis Car Co.	1894	31'3" single-truck open passenger motor	
32-33	Brownell Car Co.	189?	27' single-truck closed passenger motor	
1	McGuire-Cummings Mfg. Co.	1895	snow sweeper	
34	Company Shops	1896	34' single-truck closed passenger motor	(1)
6	?	?	single-truck closed passenger motor	(2)
35-38	St.Louis Car Co.	1903	33'2" single-truck closed passenger motor	(3)
01-04	St.Louis Car Co.	1893	23' single-truck open passenger trailer	(5)
40-43	American Car Co.	1907	40'2" double-truck closed passenger motor	order #722 6/15/07
9-12	J. G. Brill Co.	1907	26'1" single-truck open passenger trailer	(7)
44-46	American Car Co.	1908	single-truck closed passenger motor	order #763 5/15/08
2	McGuire-Cummings Mfg. Co.	1908	snow sweeper	
47-48	American Car Co.	1910	single-truck closed passenger motor	order # 860 2/16/10
49-50	St.Louis Car Co.	1912	single-truck closed passenger motor	(8)
51-57	St.Louis Car Co.	1916	42'0" double-truck closed passenger motor	(9)

Notes:

(1) Rebuilt from two horsecars spliced together. Nicknamed "Long Annie".

(2) Converted horsecar.

(3) Order number 369A dated February 24, 1903. ST LOUIS #35 TRUCK

(4) A newspaper article dated November 5, 1900, reported that a LaCrosse firm was building a 32'

long railroad or elevated type car for the company which would be a new style car. No other information on this; perhaps never completed.

(5) Acquired from Madison Railways (Wisc.) after 1902 but before 1907. Madison numbers 10-13.

(6) No record of a car number 39 has been found.

(7) Acquired second-hand, probably 1907. Originally built at an earlier date.

(8) Order number 915 dated February 19, 1912. ST LOUIS #4L TRUCK

(9) Order number 1090 dated February 21, 1916. ST LOUIS #109A TRUCKS

U. S. Census data:	1902	1907
closed passenger motor cars	15	23
open passenger motor car	1	1
open passenger trailers		8
snow sweeper	1	1
total	17	33

All were two-motor cars except one, number 34, which had one motor. The closed motor cars were numbers 6,20-30,32-34 in 1902; the additional eight cars by 1907 were numbers 35-38,40-43. The open passenger motor car was number 31, and the open trailers numbers 01-04,9-12.

Cars 35-38 were used on the NORTH SIDE line until 1907 when they were replaced by 40-43; the former were then transferred to the SOUTH SIDE line. On April 21, 1908, one car was struck and demolished by a Green Bay & Western R.R. freight train at the Market St. crossing (box car 1078 struck the middle of the streetcar). #38

A report by the Railroad Commission of Wisconsin of an inspection made during December, 1917, listed these accomplishments. (1) Put into service seven new double-truck, pay-as-you-enter cars with air brakes (numbers 51-57). (2) Remodeled and equipped with air brakes four older double-truck cars (numbers 40-43). (3) Remodeled all single-truck cars having transverse reversible seats (probably numbers 35-38,44-48). (4) Entirely removed from the property all old single-truck cars with longitudinal (side) seats (probably 20-30,32-34). (5) All cars had been repainted pullman green with yellow trim. (6) All cars operated on a p.a.y.e. basis had been equipped with Cleveland fare boxes.

A report by the company to the Railroad Commission dated March, 1918, listed 18 cars in service: 35-38,44-48,49-50,51-57. A subsequent letter dated May, 1918, listed only 17 cars, number 48 being omitted. A transit directory dated July, 1918, listed 22 passenger motor cars (35-38,40-48,49-50,51-57) and four other motor cars.

A fleet of thirteen modern single-truck Birney cars was purchased from St.Louis Car Co. from 1920 to 1926. All were 28'0½" long, weighed 8½ tons, seated 32 persons, and equipped with a St.Louis #7 truck.

Numbers	Order No.	Date
1-8	1225	2-21-1920
9-11	1279	6- 2-1922
12,14	1417	8-17-1926

A transit directory dated November, 1923, reported 22 passenger motor cars (10 one-man operated) and four other motor cars.

One double-truck car was scrapped during 1928.

The last cars in use were numbers 51-57 on the NORTH SIDE line until November, 1945. The body of number 56 was eventually acquired by a traction fan. It was reportedly donated inn 1985 to what it now the East Troy Trolley Museum. However in 1992 it was listed as "now on the property of its West Bend, Wisc., owner". It is not included on a list of cars at East Troy in 1995.

American Street Railway
Investments LaCrosse City Ry.

13.95 miles of track
40# to 66# girder and T-rail
12 motor cars + 17 Trailers
Allis engines
G.E. dynamos & motors
St. Louis Cars
2-1898

La Crosse
American Car Co.

40-43 Order# 722 DELIVERY 6-15-1907 DE-DT-DR
Brill 27GI trucks. Photo 7-30-1907
Semi-convertible

44-46 Order# 763 DELIVERY 5-15-1908 DE-ST-DR
Brill 21E truck. Photo 5-18-1908

47-48 Order# 860 2-16-1910 Delivery 6-1-1910
Brill 21E truck. Photo 6-25-1910

Details on 40-43
Length over body 28'; over Vestibules 38'
Width 8'4". Weight 17 Tons.
2 GE 80 motors. Wood & Metal underframe.

LACROSSE & ONALASKA STREET RAILWAY

According to the 1890 U.S. Census this line was 2.88 miles long with 2.92 miles of track, two horsecars and six horses or mules. By the time of the 1902 U.S. Census the line had been electrified.

Data from the 1902 and 1907 U.S. Censuses are identical. Total track 2.67 miles, no sidings, of which 0.74 miles was located on private-right-of-way. Side bracket construction 2.00 miles and span wire construction 0.67 miles. One single-truck, closed passenger motor car, number 1, acquired second-hand, was owned.

A description of the route, dated 1907, was: from George and Gohres Streets, on George St. to Campbell St., on Campbell St. to an un-named street in a new addition connecting with the County Road, thence to the west end of Main St. at J St. in Onalaska. Since the LaCrosse City Railway had relocated track at the north end of its NORTH SIDE line in 1906, by 1907 the LaCrosse & Onalaska St. Ry. would have had to relocate its connecting track on Loomis St. from Campbell St. to Livingston St.

A single-truck, deck-roof, closed passenger motor car, number 2, was acquired new from American Car Co. in 1911. order # 899 1-28-1911 ST DE DR BLDR PHOTO 4-13-1911
Brill 21E truck 20ft body

The Wisconsin Railway, Light & Power Co. leased the line about 1914. A transit directory of July, 1918, listed 2.37 miles of track and two passenger motor cars. The November, 1923, directory listed the same track mileage but only one passenger motor car.

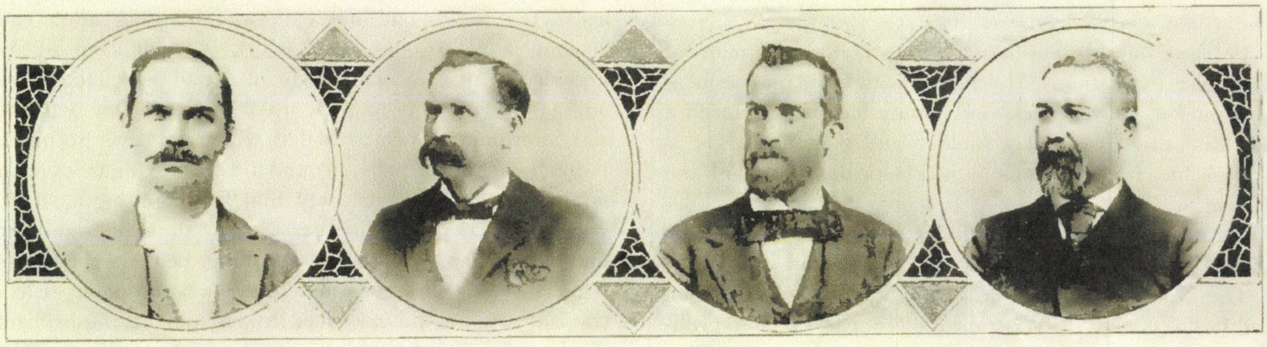
Complete abandonment occurred December 31, 1930.

American Street Railway Investments
1898

LaCrosse & Onalaska St Ry
3.5 miles of track (electric)
1 motor car + 3 trailers = 4 total
12-1898

LA CROSSE AND ONALASKA STREET RAILWAY.

One of the most enterprising of the many solid manufacturing towns of Wisconsin is La Crosse, the French origin of which is betrayed in its name. It has been an important place from its earliest days as a commercial point and enjoys a reputation far in advance of its population.


F. POOLER. J. B. CANTERBURY. P. VALIER. B. E. EDWARDS.

One of the prominent features that has helped advertise the city is its remarkably efficient system of electric railway which is loyally supported by the 20,000 inhabitants of the town.

The line of the La Crosse City Railway comprehends 11 miles of standard gauge track laid with 48 pound T and 58 and 66 pound girder rail; 11 motor cars and 10 trail cars equipped a la General Electric. In connection with the line is a branch to the suburban village of Onalaska three miles distant. This line was built four years ago by J. B Canterbury of La Crosse, more as a real estate venture than as an investment. The traffic on the branch seemed so profitable, however, that just recently the track was bonded, wire run and power rented of the City Railway and the Onalaskans now enjoy electric transit. Since the change traffic has increased 100 per cent.

W. W. CARGILL.

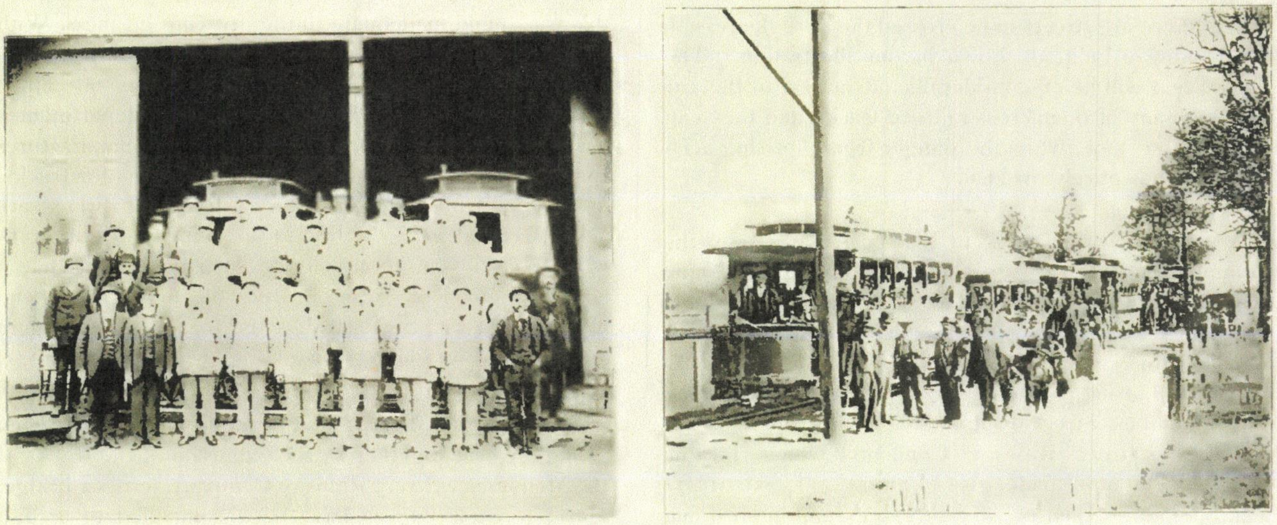
Mr. Canterbury being in feeble health resigned the presidency in favor of Hon. Frank Pooler of Onalaska, under whose management it is now operated, with Peter Valier as superintendent.

The beginning of street cars in La Crosse dates back to 1879, when a few prominent citizens, for philanthropy's sake, thought they would build a mile and a half of horse car track from what is known as South La Crosse to North La Crosse. It was operated by horse power for six or seven years with wonderful success, paying 40 per cent on the investment.

The road was finally sold to B. E. Edwards, W. W. Cargill, G. C. Hixon, Henry Gund and others, for ten times the original cost, and new organization effected.

The line was then extended all over the city. It was operated by horse power until 1893, when electricity was adopted as stated.

The management is composed of pushing, enthusiastic men who believe in La Crosse and electricity. They are by name: B. E. Edwards, president; W. W. Cargill, vice-president; G. H. Clark, treasurer; H. E. West, secretary and Peter Valier, superintendent.


VIEWS OF THE LACROSSE & ONALASKA STREET RAILWAY.

President Edwards is a pushing young business man, and to his wise counsel much of the success of the fine system is due. He is interested both patriotically and financially in many large enterprises.

Vice-president Cargill is another financier of ability. He is head of the large grain firm of W. W. Cargill & Co., which has branches in many cities of the northwest. He is energetic and progressive.

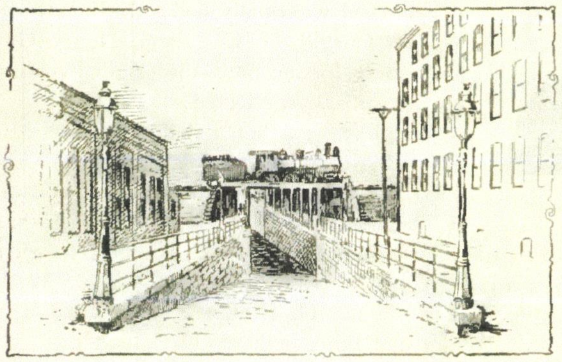
Peter Valier, superintendent, is a self-made man of Canadian extraction. He began with a meager education and by dint of pluck and ability has made himself a first-rate electric railway builder and manager. He is responsible for the smooth mechanical running of the system.

J. B. Canterbury is of Irish birth, an ex-Union soldier and an active citizen in every good word and work.

The Honorable Frank Pooler is a prominent politician and business man of Wisconsin. He has made a brilliant record and as he is only 40 years of age has still a wide future.

CHICAGO TRACK ELEVATION.

All of the steam railroads are being compelled by the City of Chicago to elevate their tracks within the city limits, in order to avoid grade crossings. The principal advantage to the railroads will be an increase of speed.



Where there are streets to be crossed they are depressed, and a subway built, as shown in our illustration. The new system will be of considerable advantage to the car lines, as many of them cross railroad tracks, and they can make better time, while the danger from crossing accidents will be entirely avoided.

A DIVIDEND of 3 per cent has been earned by the Columbus, O., Street Railroad Company for the nine months ending October 1. The gross earnings and rents aggregated $421,166.96, of which $197,781.56 was absorbed by operating expenses and $132,307.65 by interest and taxes, leaving $91,077.75 for the stockholders. The Columbus Street Railroad Company operates the Crosstown Street Railway Company, which, for the same nine months, made gross earnings of $59,013.71 with operating expenses of $23,474.38 and interest and taxes amounting to $14,700.85, leaving $20,838.48, net.

MADE THE FIRE FLY.

Some electric railway men were exchanging prevarications the other evening, when one of the party broke over the rule by telling a true story. As it was a good one, it was allowed to pass. The trolley wire broke one day, and a clerk in the offices of the company was instructed to go out and wrap the hanging down end around a pole. Now the clerk was innocent of all knowledge of electricity. He also had a refined taste, and as he went out to pick up the live trolley wire he saw an iron lamp post available, which was ever so much better to wrap the wire around than the vulgar wooden poles. A kind fortune kept him from getting a shock while he carried the live end across the street, and the first intimation he had of anything being wrong was when the wire first touched the iron lamp post. Electric railway men do not need to be told of the brilliant display of fireworks which immediately took place. The clerk started up the street on the run. He was probably as much surprised as a dog which came along where the boys were repairing the line one day and smelled of the end of a live trolley wire. The boys at first claimed there was a streak of fire a block long, but after cogitation concluded that it was simply the yellow dog under full speed.

CHARLES SCOTT SPRING COMPANY.

The Charles Scott Spring Company, of Philadelphia, has recently bought the lot adjoining its present factory and thereby secured frontage of 130 feet on Germantown avenue, 120 feet on Canal street and 43 feet on New Market street. A siding from the Philadelphia & Reading Railroad, running on Germantown avenue, will run into the works and greatly increase the shipping facilities. The new addition to the factory is now in process of erection and will be under roof by the middle of October. This new shop will be devoted entirely to the manufacture of elliptic springs. The old elliptic mill has a capacity of 100 tons of elliptic springs per month, but this was found inadequate to the growing business. With the new shop, the Charles Scott Spring Company will have a total capacity of nearly 3,000 tons of elliptic springs annually, while in the spiral spring department it has a capacity of 5,000 tons. This concern manufactures springs of every description, including springs for trucks, motors and trolley stands. Its brush-holder springs are acknowledged to be the best in the country. The company's business is increasing to such an extent that it is unable to look after it from the home office, and now has Arthur S. Partridge as the St. Louis agent and F. A. Lawson & Co., in San Francisco, Cal.

MENOMINEE, Mich., and Marinette, Wis., have been brought closer together by the extension of the tracks of the Menominee Street Railway Company across a bridge. Heretofore passengers have been compelled to walk a block to make the connection from one line to the other.

shop addition can be erected on the north side adjoining the heated portion. Heat will be furnished by a coil system. City water is used and it is planned to install a sprinkler system under main pressure only, considerable material for this having been salvaged from the old car barn which was demolished. Natural light will be ample, due to the monitor roof, skylights and frequent windows and artificial lighting is secured by an arrangement of 60 and 100-watt lamps.

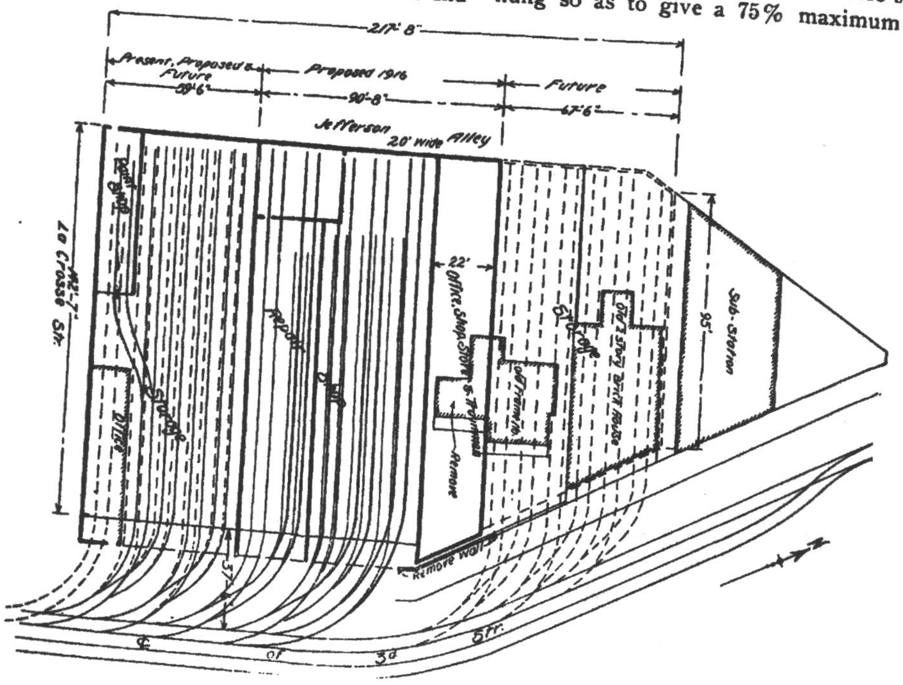
Eight single track cars are used in the regular city service of Muscatine, but additional storage is provided for a sweeper, two interurban cars and eleven other single truck motors and trailers. Only light repairs will be made at this building as the heavy work is taken care of at the main shops at Davenport or Rock Island. The shop equipment here will consist of a lathe, drill press, forge and grinder.

◆

REMODELING OF LA CROSSE CAR STATION

By N. O. Smith-Petersen

The present Third street car station of the Wisconsin Railway, Light & Power Company, at La Crosse, Wis., consists of two bays; a south bay of four tracks, with three individual repair pits, a partitioned-off office, paint shop with spur and a 20-ft. wide space at the west end for small machine tools under which is located a basement used for old storage and sand dryer, etc.; and a north bay without repair pits, containing a machine shop at the west end, and three short, open-air, storage tracks north of the building.



Plan Showing Details of La Crosse Car House Remodeling

The necessity of an increase in rolling stock required additional storage capacity and the increased size of the new cars demanded changes in special work at the entrance to the car station. Property available for extensions is very limited, making economy in space a great consideration. All switching is done in the street and a limitation of this is most desirable.

To meet these conditions it was decided to set back the front of the car station 10 ft. from the property line; extend the tracks the full length of the property; tear down the present north bay; re-space the tracks north of the south bay; tear down the present office partition; build a new repair shop without columns, directly north of the present south bay, to contain five tracks at 13-ft. centers, with open repair pit under all tracks, two new cars in length; rehabilitate the present pits in the south bay; and re-locate the shop, office, store and trainmen's rooms, directly north of the new repair bay, with basement for toilet, lockers and old storage.

This would take care of immediate requirements, leaving the property between the office building and the existing substation for future extension. It is necessary, however, that an office building of sufficient size be built at this time to take care of ultimate extension, giving such office building a central location.

The new front is carried on steel trusses which also support the front sliding doors. These sliding doors are hung so as to give a 75% maximum door opening. They are of light, wood frame construction, covered with No. 24 galvanized iron.

As the present track construction in front of the car station is in excellent condition and in permanent pavement the curve radii at the entrance are increased sufficiently to meet the new center lines.

In the new repair shop the pit is approximately 56 ft. wide, entirely open, extending 95 ft. east from the west wall, with five concrete stairs at the east end. It has

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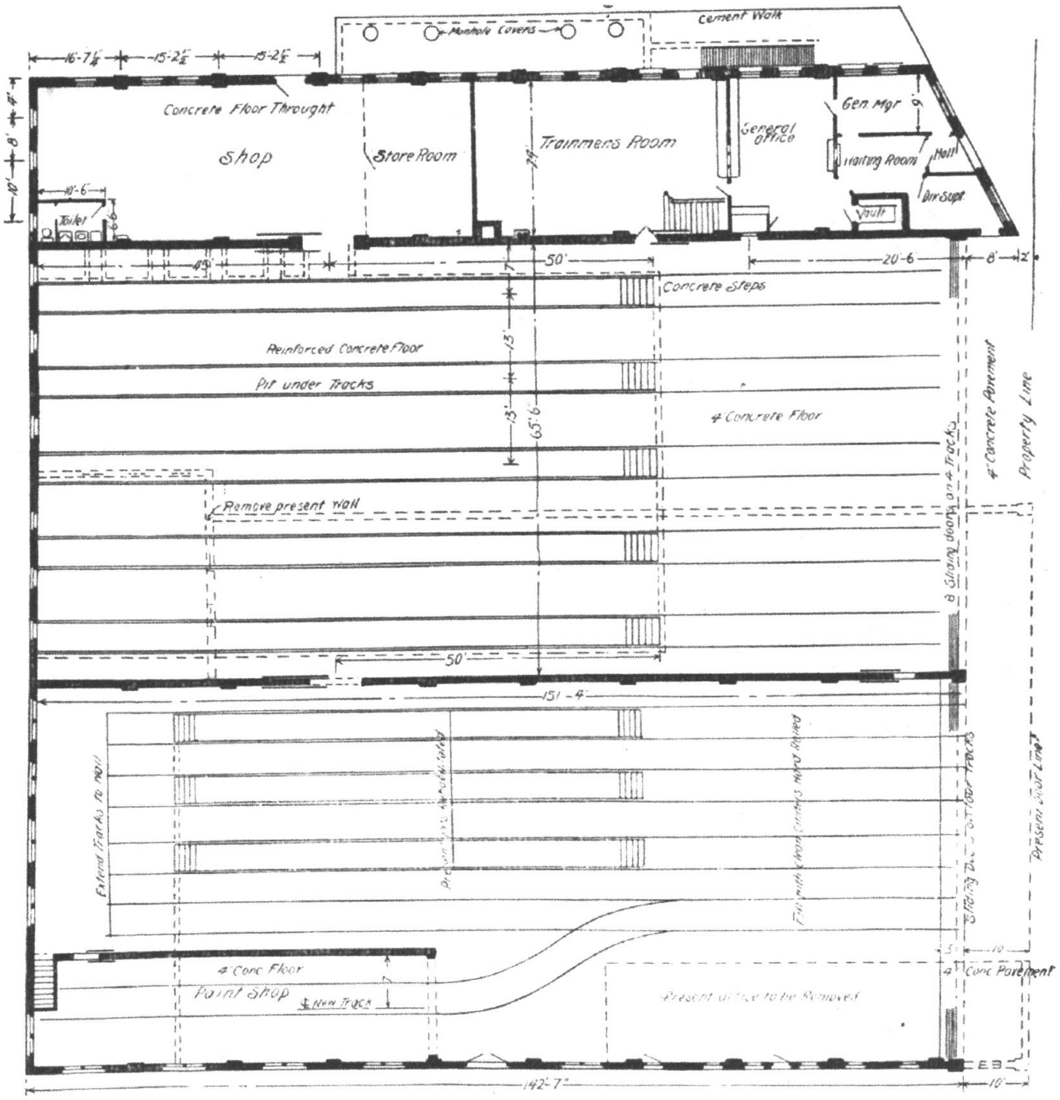
reinforced concrete side and end walls and a 6-ft. reinforced concrete walk across the tracks at shop floor level, located so as to make a direct passage between cars, from shop, through wall, to south bay. Tracks are carried on channel iron bents, supporting reinforced concrete platforms between tracks.

Special attention has been paid to the elimination of cracks in the concrete platforms, due to rail deflection, and has been accomplished through a free rail construction, consisting of wood, rail fillers and special rail clips, thus making possible the removal of the rails without disturbing the concrete construction. The rails used are 7-in., 95-lb., T, spanning 5 ft. from center of steel bent to center of steel bent.


Cement Walk
Manhole Covers
16-7½
15-2½
15-2½
Concrete Floor Throught
Shop
Toilet
10-6
Store Room
Trainmens Room
General Office
Gen Mgr
Waiting Room
Hall
Div Supt
Vault
49
50'
20-6
8'
2'
Concrete Steps
Reinforced Concrete Floor
Pit under Tracks
4' Concrete Floor
65-6
Remove present Wall
8 Sliding doors on 4 Tracks
4' Concrete Pavement
Property Line
50'
151-4
Extend Tracks to Wall
Fill with Cinders Hard Rolled
Sliding Doors Four Tracks
Present Door Line
4' Conc Floor
Paint Shop
New Track
Present office to be Removed
Conc Pavement
142-7
10'

Plan of Remodeled Car House at La Crosse, Wis.

Headroom has been made 16 ft. allowing inspection and repair of trolley bases.

The roof construction consists of 65-ft. steel trusses, supporting wood joists and sheathing, with wood frame, saw-tooth skylights of ¼-in. wire glass at alternate trusses. Skylights have been placed alongside of the trusses, instead of above, to limit the height of building, saving in mason work. A three-ply roofing is specified. This roof construction is very light and preferable to concrete construction from an economical point of view, considering construction, maintenance and fire insurance.

Provision is made for washing of cars at any point throughout both repair bays in order to avoid switching in street.

The office building provides for a general manager's office, located at the northeast corner; a superintendent's office in the southeast corner; both with separate entrances and affording a free view of all cars entering and passing car station; a public entrance; hall; waiting room; general office with vault, counters and part glass partitions for trainmen's room and public waiting room; trainmen's room, with separate entrance on north side, double swinging doors to repair bay and stair to locker and toilet rooms; store room, which is separated from

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shop by wire partition; and shop with separate toilet.

There is a basement from the trainmen's toilet and locker room to west wall, in which the boiler room is located. The boiler room has separate bins extending beyond the building line for coal, coke, ashes and sand; a sand dryer; and a bucket conveyor for elevating dry sand and coke to storage bins in store room above. Bins are provided with sliding doors, leading through brick wall into repair shop. The vacuum system of heating will be installed.

In the west end of the basement are located storage bins for old material, which bins communicate with the repair pits through concrete chutes, by means of which old castings can be conveniently removed from the pits. There is also a door and inclines leading from the basement to the pits.

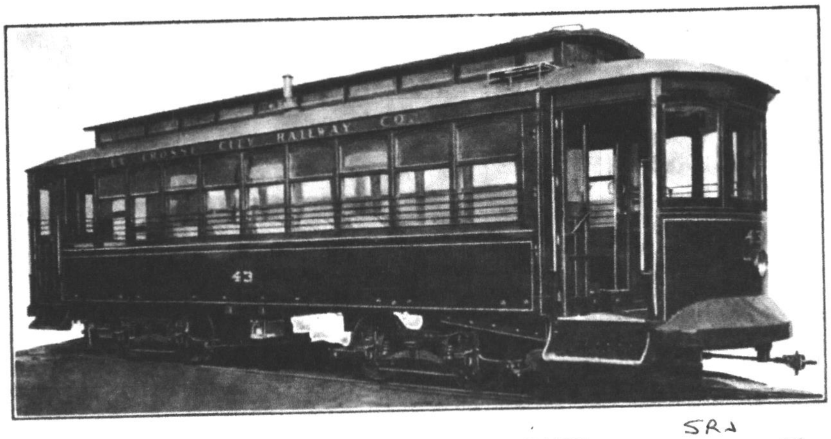
On the north side of the building, immediately above the exterior entrance to the trainmen's room, there is a 30-ft. canopy, under which benches are provided for trainmen.

Space immediately north of the shop is fenced in with a 6-ft. board fence with gate to alley, for use as a special work and storage yard.

SEMI-CONVERTIBLE CARS FOR LA CROSSE

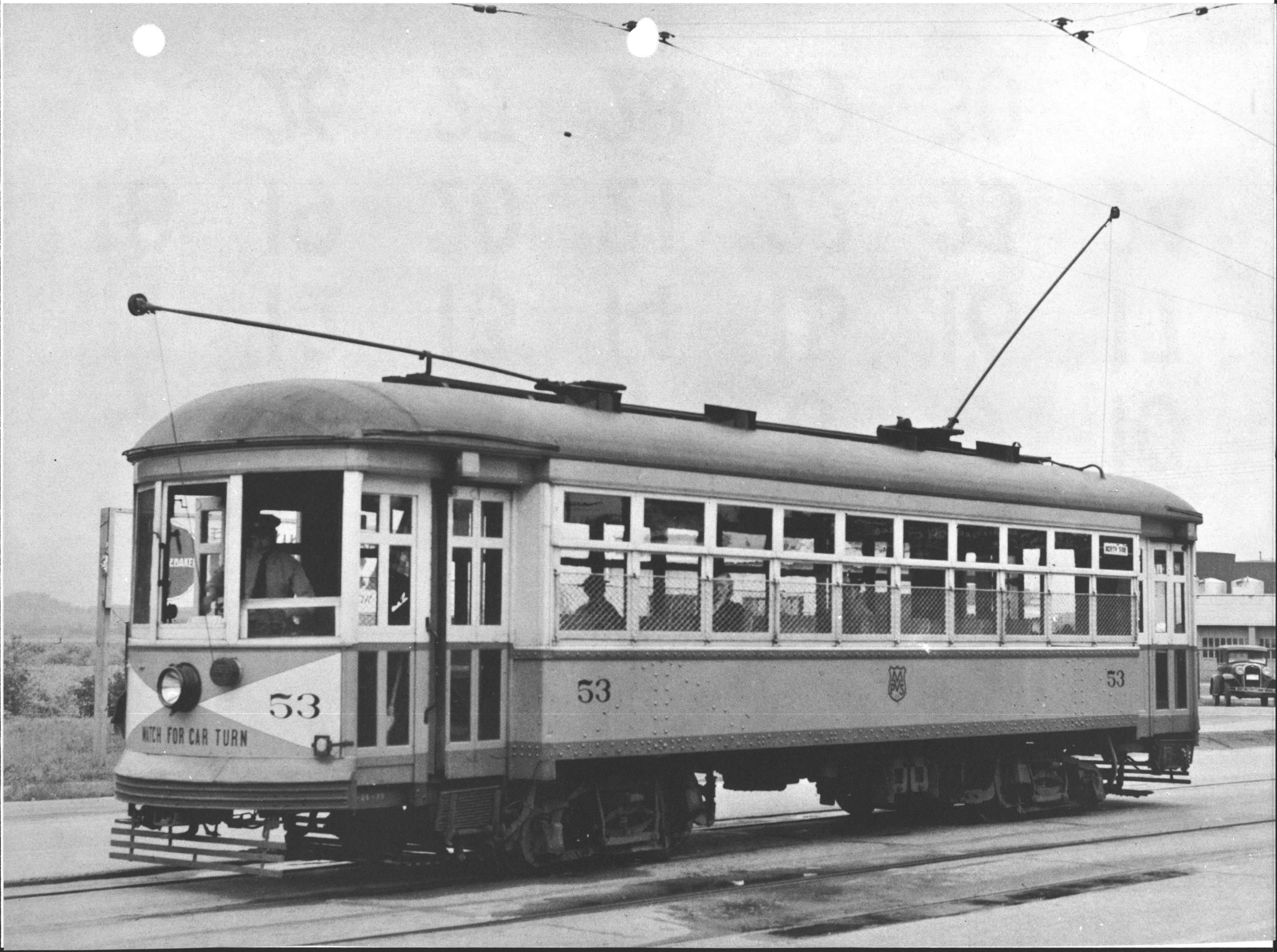
The North Side in La Crosse is separated from the main part of the city by the La Crosse River and has a population of 8000. It contains many factories is the terminus of four divisions of the Chicago, Milwaukee & St. Paul Railway and the site of the shops of the Chicago, Burlington & Quincy Railway. As the situation stands at present all traffic between North La Crosse and La Crosse proper is handled by one double-track line which crosses the river on the only available bridge connecting the two sections. The total mileage in La Crosse at present is fifteen miles, of which about four miles are double track. All lines center at Fourth and Main streets, the business center of the city; a ten-minute headway is maintained. Improvements under way consist of a half-mile extension south from Gunds' Brewery and a half-mile extension to be built east on Main Street from Sixteenth to Twenty-fifth Street next spring. An addition to the car barn at Third and La Crosse Streets is now being made to accommodate the new cars. A new storage barn for trailers and extra cars will be built on property owned by the company on the North Side; this work will also be accomplished next spring. Upon the completion of the new water power plant of the La Crosse Water Power Company at Hatfield, the company will install a motor generator set of 300-kw capacity and use this as its main power unit. The plant is now under construction and will generate 5000-8000 hp, to be used in La Crosse and Winona, Minn.; the power will also be used to operate a proposed interurban line between the cities mentioned about thirty-six miles in length.

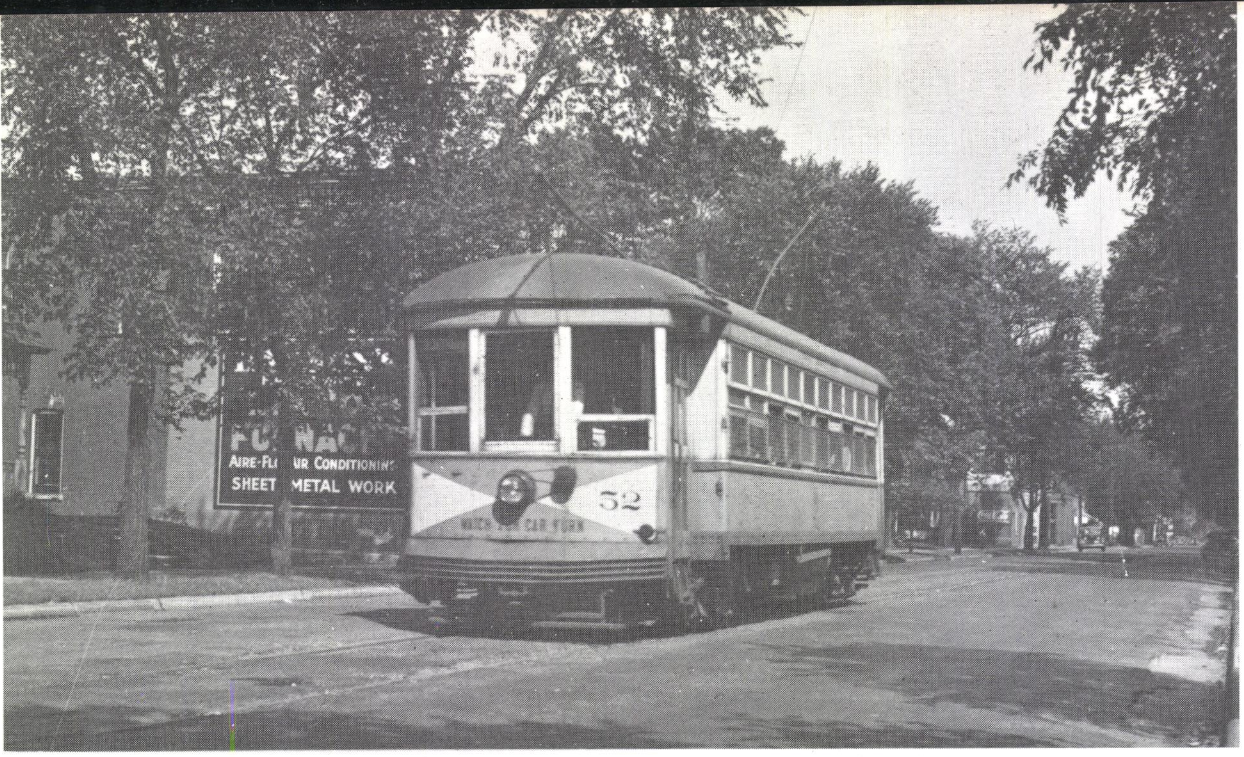
Four semi-convertible cars built by the American Car Company have recently been placed in operation on the busiest line in La Crosse. They have generous aisle space and commodious seats, the seats being 35 ins. long and aisle 24 ins. wide. On account of the low window sills five-bar guards are provided. The doors are protected in a like manner. The bottom framing includes 12 in. x 3/8 in. sill plates—a standard feature of this type of car which obviates the use of inside and under truss rods in cars of this length. The plates are screwed to the posts and are an additional means of stiffening. The seats are of Brill make; the inside finish is of cherry; ceilings of 3-ply birch. The No. 27-G1 trucks are employed. The chief dimensions of the cars follow: Length over end panels, 28 ft.; over crown pieces, 38 ft.; width over sills, including sheathing, 8 ft. 2 ins.; height from floor to ceiling, 8 ft. 5 3/8 ins.; from track to under side of sills, 32 5/8 ins.; size of side sills, 4 ins. x 7 3/4 ins.; end sills, 5 1/4 ins. x 6 13/16 ins.

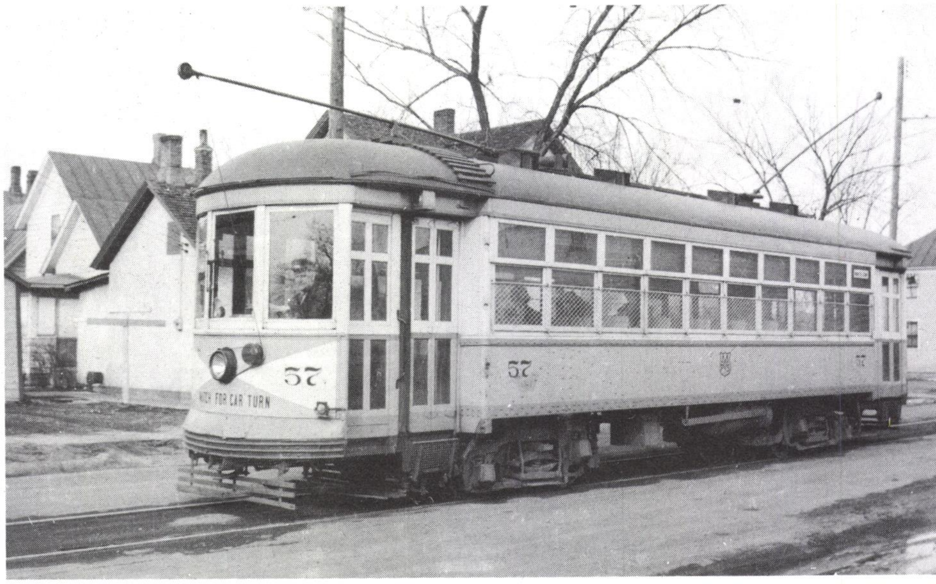


CAR FOR SERVICE IN LA CROSSE

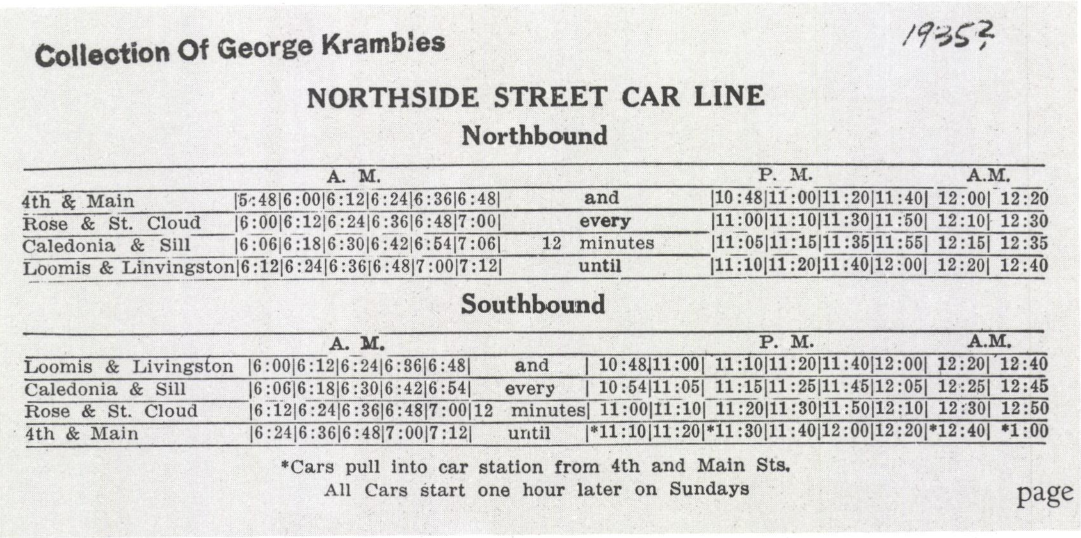
SRJ
11-2-1907


53
WATCH FOR CAR TURN
53
53





ABOVE: **No. 52 rumbles down the by-then-poor trackage on the Northside Line during 1945.** Donald A. MacBean. RIGHT: **Car 57 at Loomis and Livingston Streets on March 23, 1941.** Stephen D. Maguire. **Timetable (1935).** George Krambles.



Collection Of George Krambles

1935?

NORTHSIDE STREET CAR LINE

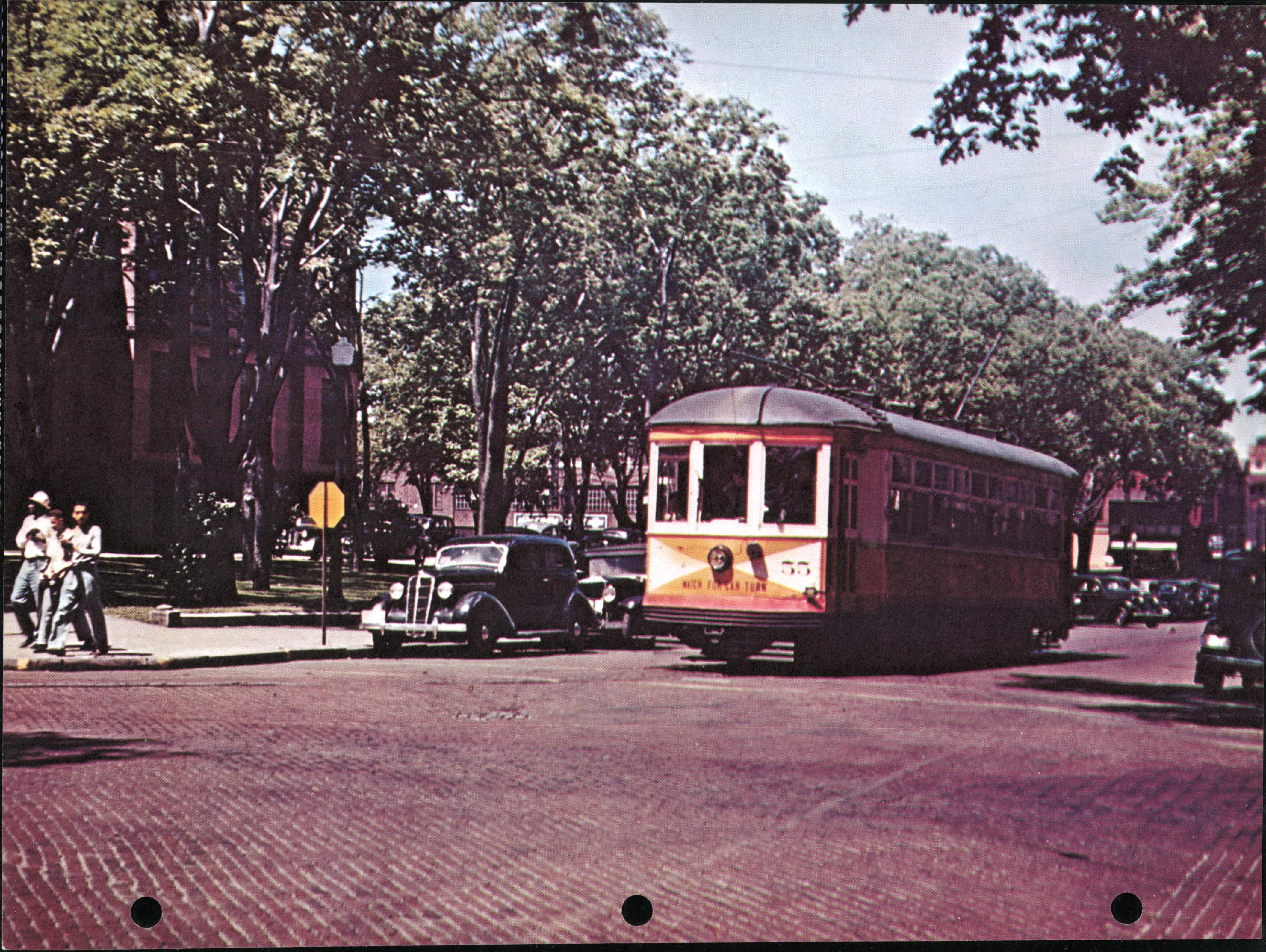
Northbound

	A. M.							P. M.				A.M.	
4th & Main	5:48	6:00	6:12	6:24	6:36	6:48	and	10:48	11:00	11:20	11:40	12:00	12:20
Rose & St. Cloud	6:00	6:12	6:24	6:36	6:48	7:00	every	11:00	11:10	11:30	11:50	12:10	12:30
Caledonia & Sill	6:06	6:18	6:30	6:42	6:54	7:06	12 minutes	11:05	11:15	11:35	11:55	12:15	12:35
Loomis & Linvingston	6:12	6:24	6:36	6:48	7:00	7:12	until	11:10	11:20	11:40	12:00	12:20	12:40

Southbound

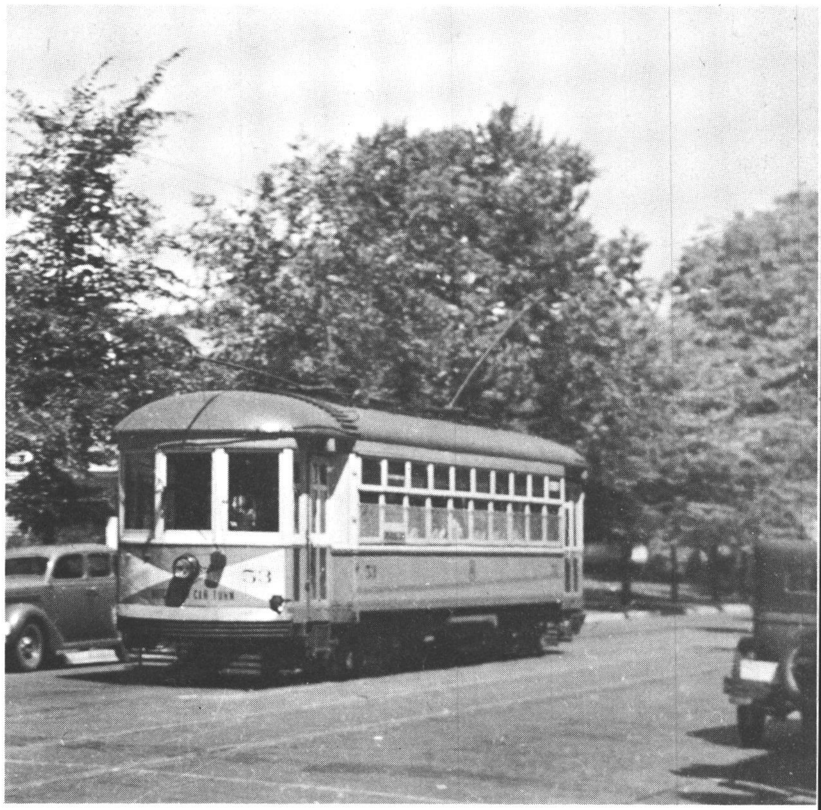
	A. M.						P. M.						A.M.	
Loomis & Livingston	6:00	6:12	6:24	6:36	6:48	and	10:48	11:00	11:10	11:20	11:40	12:00	12:20	12:40
Caledonia & Sill	6:06	6:18	6:30	6:42	6:54	every	10:54	11:05	11:15	11:25	11:45	12:05	12:25	12:45
Rose & St. Cloud	6:12	6:24	6:36	6:48	7:00	12 minutes	11:00	11:10	11:20	11:30	11:50	12:10	12:30	12:50
4th & Main	6:24	6:36	6:48	7:00	7:12	until	*11:10	11:20	*11:30	11:40	12:00	12:20	*12:40	*1:00

*Cars pull into car station from 4th and Main Sts.
All Cars start one hour later on Sundays


55
WATCH FOR CAR TURN

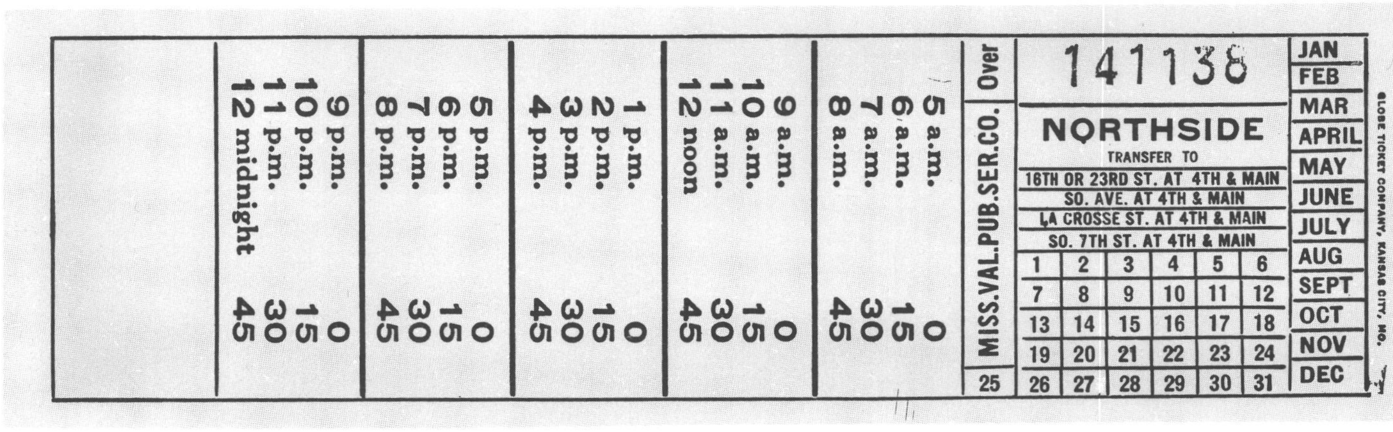
OPPOSITE: **A modern (St. Louis, 1916) La Crosse car circles through the downtown area early in World War II.** Frank Butts

Cars 53 and 57 working the Northside Line, much of which was on U. S. Highways 35 and 53. Frank Butts.



LA CROSSE CITY RAILWAY CO.

CAR NUMBER	BUILDER	BUILT	TRUCKS	MOTORS	CONTROL	WEIGHT	SEATS	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	BRAKES		REMARKS Data: J. J. Buckley L. Foitl
PASSENGER EQUIPMENT													
01-04	ST. LOUIS		ST.LOUIS				40	23'	7'9"	10'1"	HAND		OPEN TRAILERS, FORMER MADISON 10-13
1-8	ST. LOUIS	'20	ST.LOUIS 7			16,600		28'0½"	7'8"	9'9½"			BIRNEYS.
6			ST.LOUIS	2-WP30									CLOSED MOTOR, FORMER HORSE CAR.
9-12	BRILL	'07	RMKS				40	26'1"	7'9"	11'1"	HAND		OPEN TRAILERS, 9 & 11 HAD McGUIRE TRUCKS, 10 & 12 BRILL TRUCKS.
9-11	ST. LOUIS	'22	ST.LOUIS 7			16,600		28'0½"	7'8"	9'9½"			BIRNEYS.
12, 14	ST. LOUIS	'26	ST.LOUIS 7			16,600		28'0½"	7'8"	9'9½"			BIRNEYS.
20-30	ST. LOUIS	'93	McGUIRE	2-WP30			24	25'9"	7'8"	11'	HAND		CLOSED MOTORS.
31	ST. LOUIS	'94	ST.LOUIS	2-GE67			50	31'3"	8'2"	11'9"	HAND		OPEN MOTOR.
32-33	BROWNELL		McGUIRE	2-WP30			20	27'	7'7"	10'11"	HAND		CLOSED MOTORS.
34	CO. SHOPS		ST.LOUIS	1-WP30			32	34'	6'8"	10'7"	HAND		CLOSED MOTOR MADE FROM 2 SPLICED HORSE CARS. REBUILT 1896.
35-38	ST. LOUIS	'03	ST.LOUIS 35	2-GE67			32	33'2"	8'1"	11'9"	HAND		CLOSED MOTOR.
40-43	AMERICAN	'07	BRILL 27G	4-GE54	K12A	36,524	40	40'2"	8'6"	12'3"	HAND		SEMI-CONVERTIBLES.
44-46	AMERICAN	'08	BRILL 21E	2-GE80									CLOSED MOTORS.
47, 48	AMERICAN	'10	BRILL 21E	2-GE80									CLOSED MOTORS.
49, 50	ST. LOUIS	'12	ST.LOUIS 46										CLOSED MOTORS.
51-57	ST. LOUIS	'16	ST.LOUIS 109A	WH 307CV	K51A	38,900		42'0"	8'9"	11'3½"			CAPACITY 40 SEATS AS 2-MAN CAR, 46 SEATS AS 1-MAN CAR. CAR 56 WAS DAMAGED IN ACCIDENT WITH CB&Q TRAIN 5/3/17.
WORK EQUIPMENT													
1	McGUIRE	'95											SWEEPER.
2	McGUIRE	'08											SWEEPER.



141138

NORTHSIDE

TRANSFER TO

16TH OR 23RD ST. AT 4TH & MAIN

SO. AVE. AT 4TH & MAIN

LA CROSSE ST. AT 4TH & MAIN

SO. 7TH ST. AT 4TH & MAIN

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30	31

JAN
FEB
MAR
APRIL
MAY
JUNE
JULY
AUG
SEPT
OCT
NOV
DEC

GLOBE TICKET COMPANY, KANSAS CITY, MO.

Over

MISS.VAL.PUB.SER.CO.

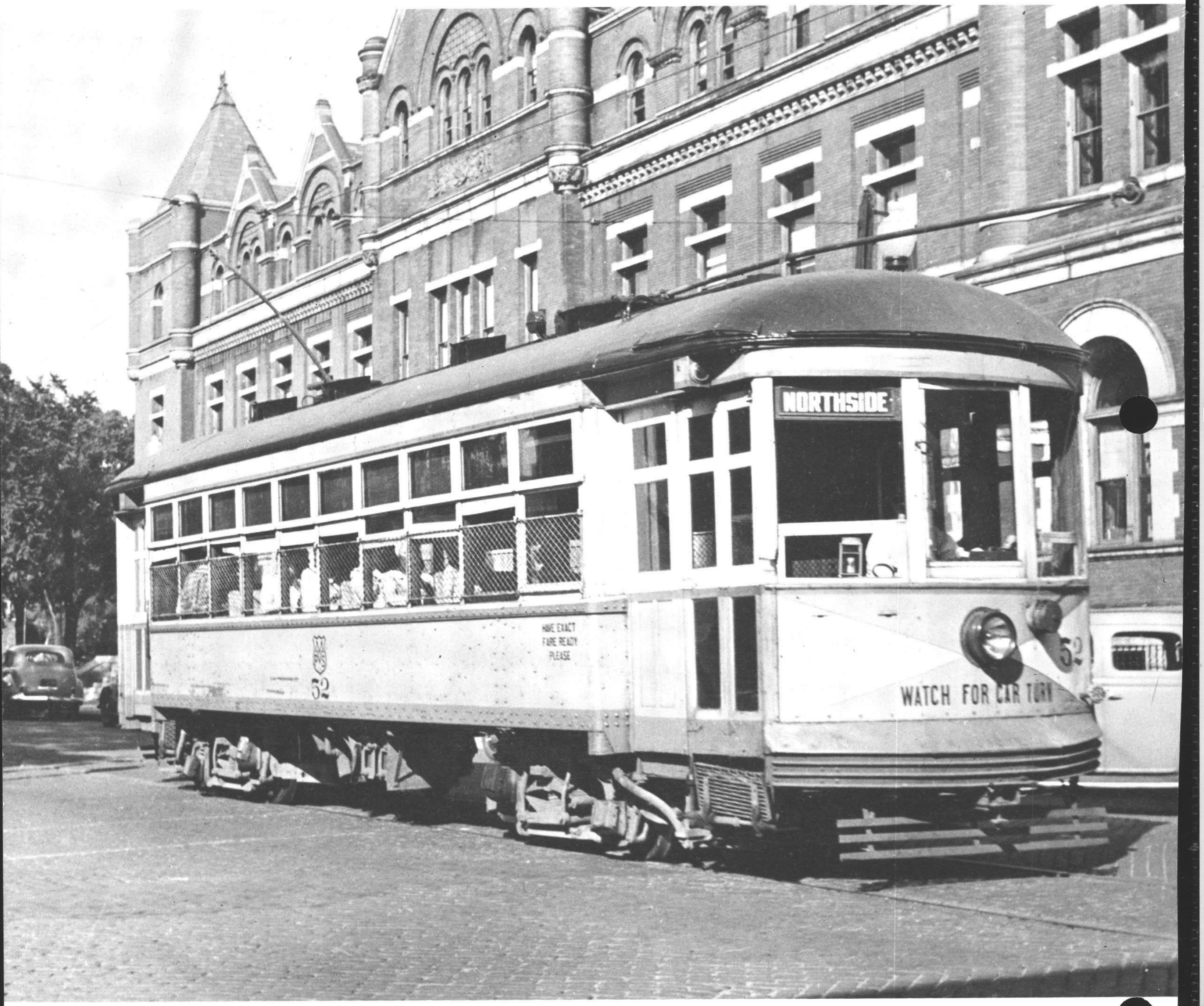
5 a.m. 0
6 a.m. 15
7 a.m. 30
8 a.m. 45

9 a.m. 0
10 a.m. 15
11 a.m. 30
12 noon 45

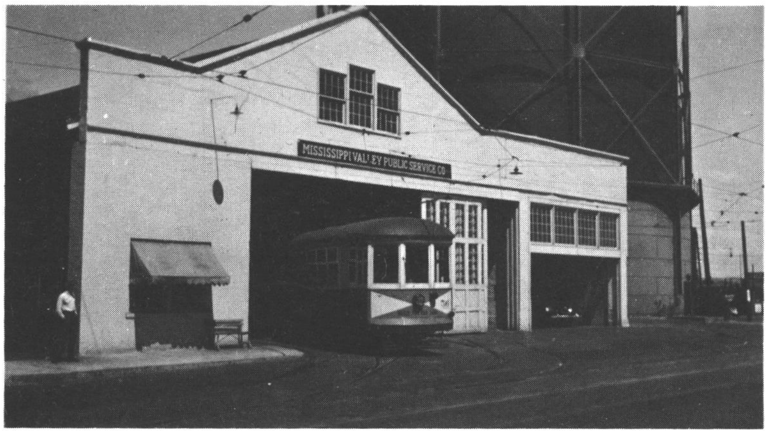
1 p.m. 0
2 p.m. 15
3 p.m. 30
4 p.m. 45

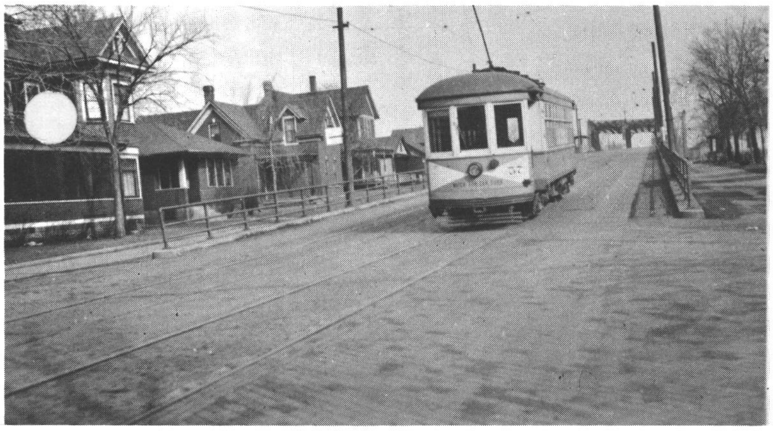
5 p.m. 0
6 p.m. 15
7 p.m. 30
8 p.m. 45

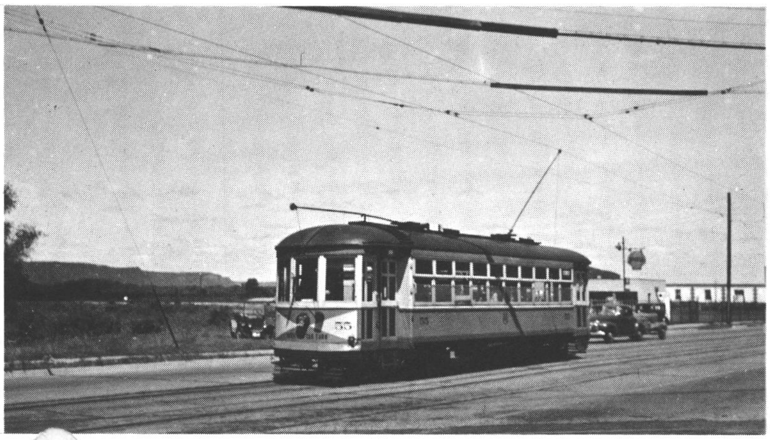
9 p.m. 0
10 p.m. 15
11 p.m. 30
12 midnight 45

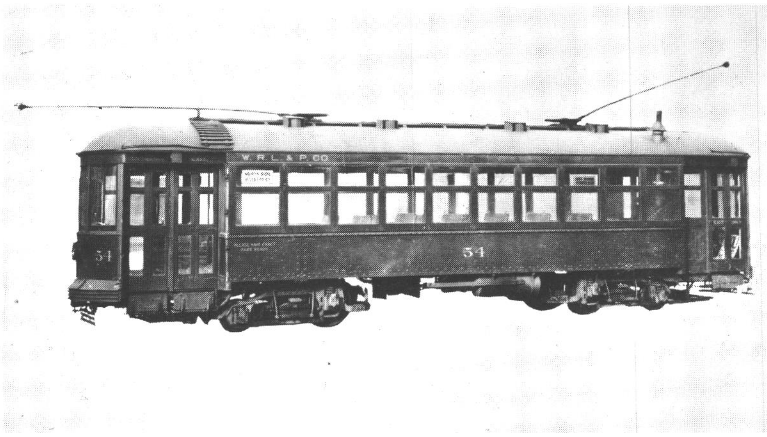

NORTHSIDE
HAVE EXACT FARE READY PLEASE
52
52
WATCH FOR CAR TURN

These views show routine operations of the La Crosse 51-57 series cars on the Northside Line. This line was the last streetcar operation in Wisconsin outside the city of Milwaukee (which had two properties that operated after La Crosse service ended). Frank Butts. OPPOSITE: Donald A. MacBean.

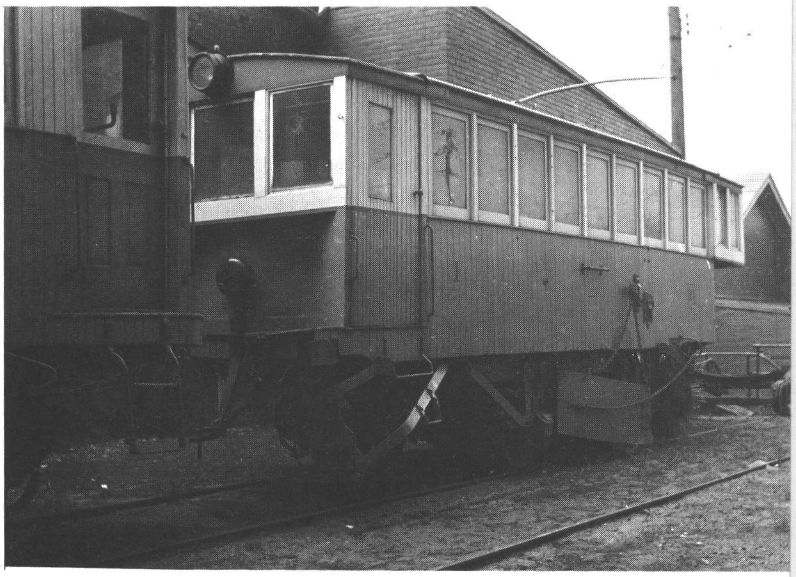

MISSISSIPPI VALLEY PUBLIC SERVICE CO.

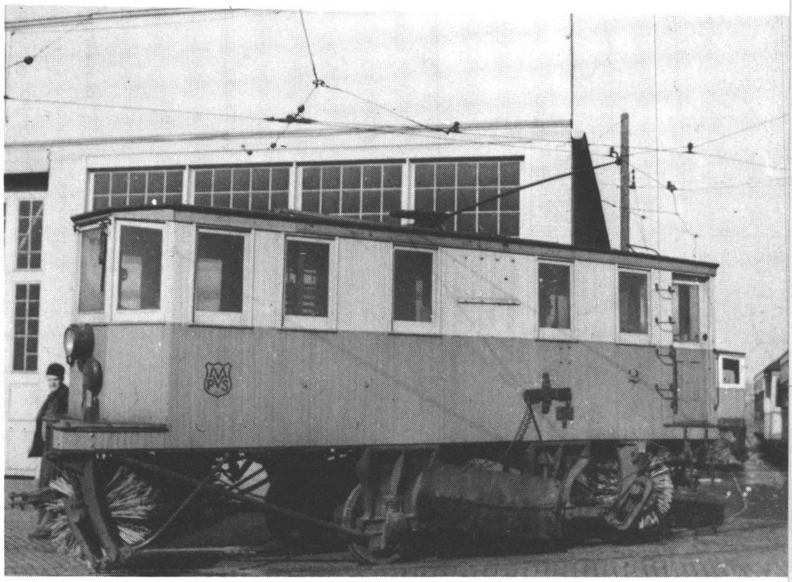


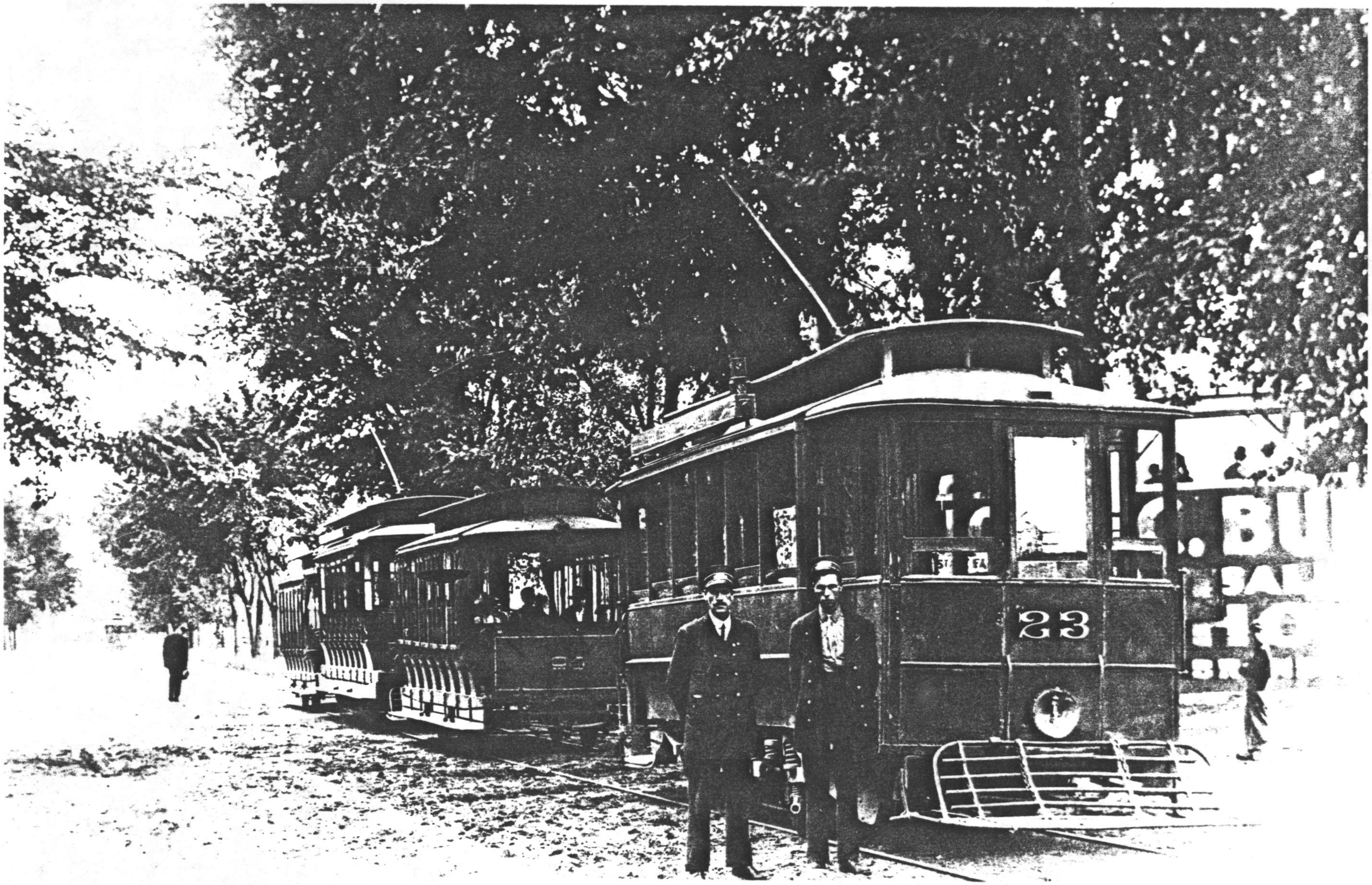




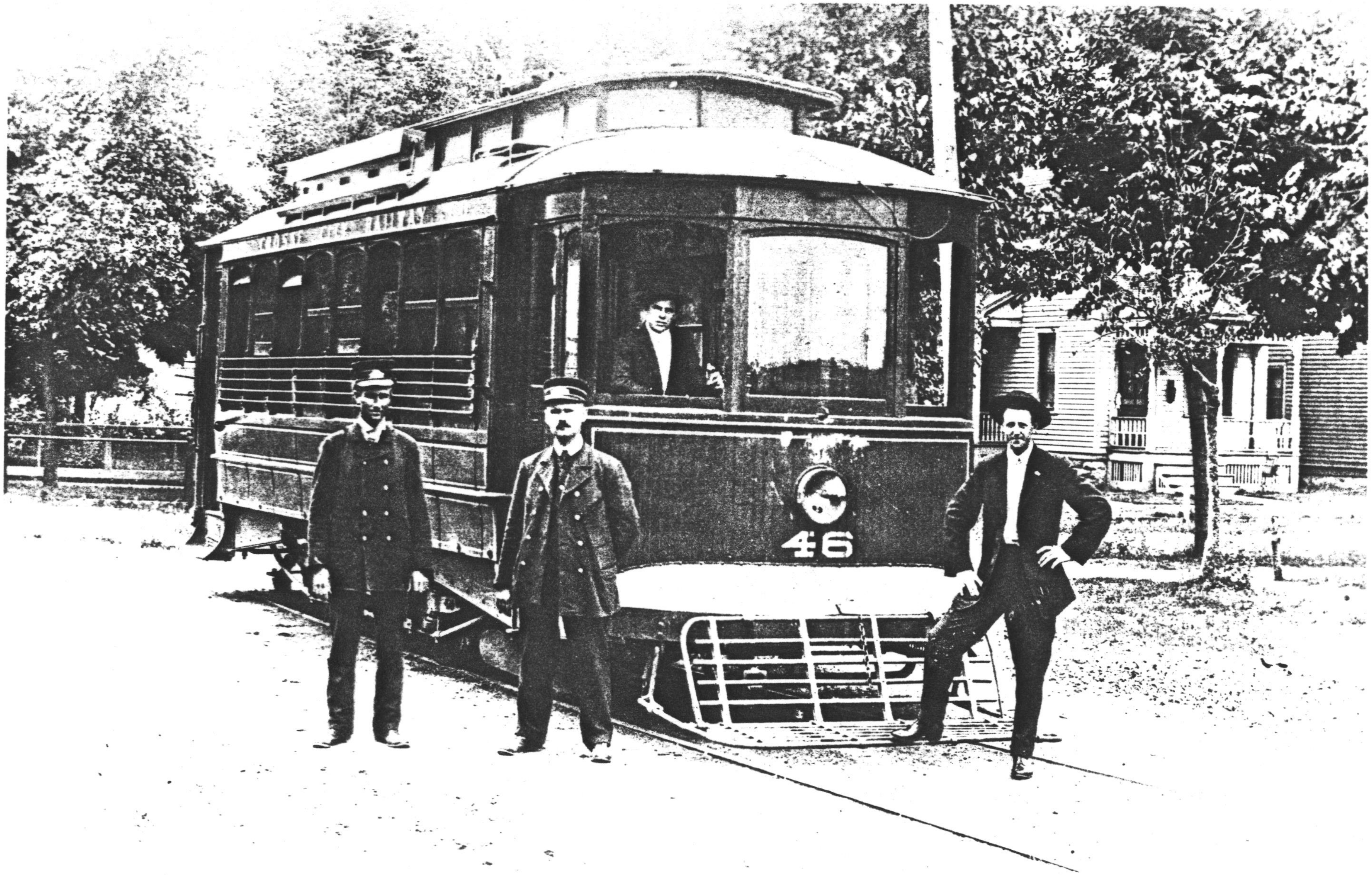
ABOVE: **Car 54 during the 1920's.** Wisconsin Public Service Co. BELOW: **Views of La Crosse's two snow sweepers.** Frank Butts; Stephen D. Maguire.



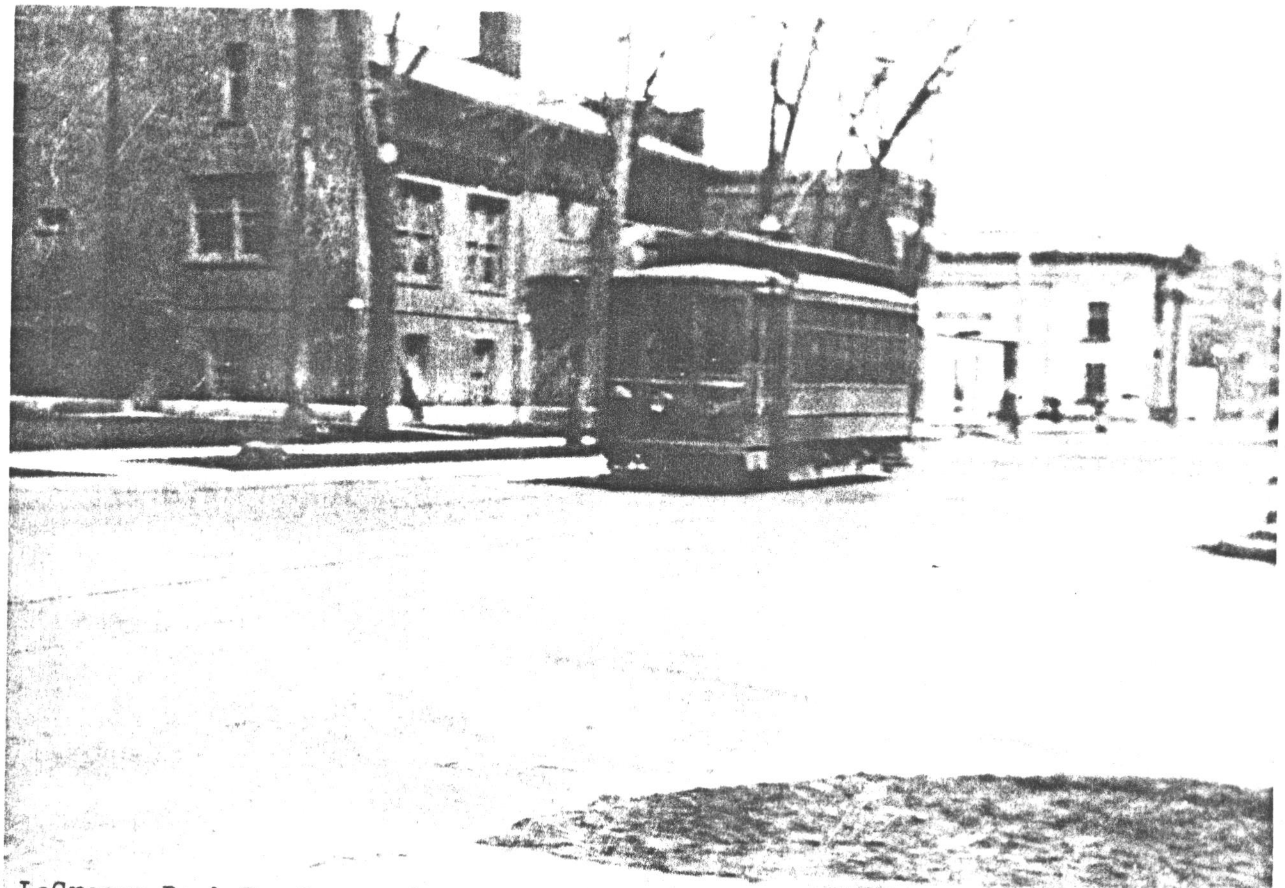




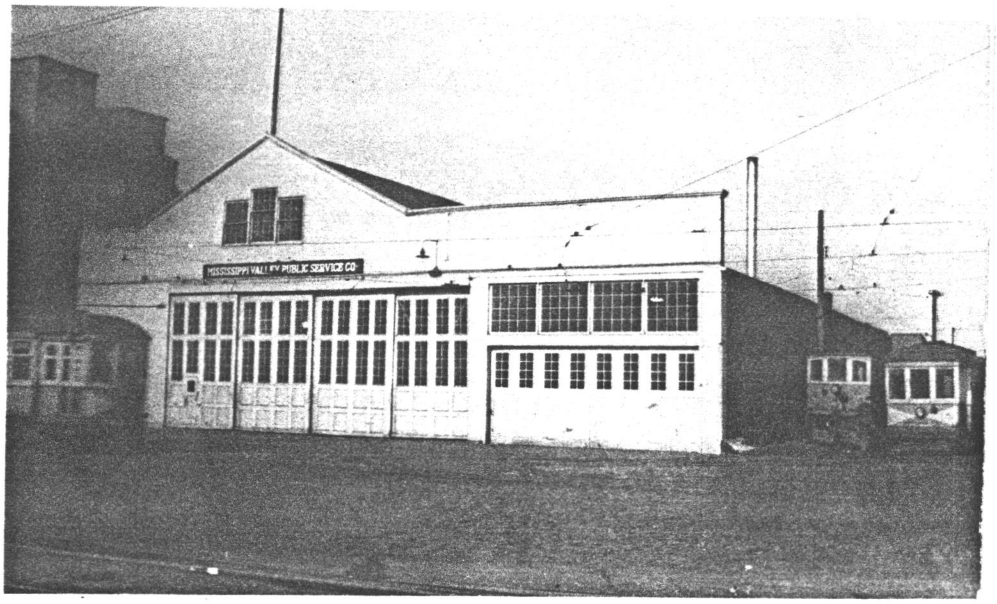
LaCrosse City Railway Company Car No. 23 (1893 20-30 series), with "Oak Grove Cemetery" destination sign, accompanied by 10-bench open electric No. 31 sandwiched between open trailer No. 24 and another open trailer at the Base Ball Park in LaCrosse about 1900. St. Louis built Car 23 had a McGuire truck and two WP30 motors was 25'9" long, 7'8" wide and 11' high with longitudinal seats for 24 passengers. Open Car 31, St. Louis built in 1894, seated 50, had a St. Louis truck and two GE67 motors, was 31'3" long, 8'2" wide and 11'9" high.



LaCrosse City Railway Company Car No. 46.(1908 44-46 series), built by American Car Company, at the Farnam Street end of the Market Street line on 14th Street headed north about 1913. Two more of this type, 47-48 were built by American in 1910 all having a Brill 21E truck and two GE80 motors.



LaCrosse Deck Roof Car 36, 1903 St. Louis Series 35-38, In Winona on Center


MISSISSIPPI VALLEY PUBLIC SERVICE CO.

Double-truck Car 52 Passing Barn, Sweeper 2 and 51.